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ORIGINAL ARTICLES.

ERGOT IN CHRONIC MALARIA.[1]

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THESE notes are written exclusively for clinical purposes. That is why a few words on the active principles of ergot may suffice. They are sphacelinic acid, cornutin, also trimethylamin, vernin, and ergotinic acid. Trimethylamin gives rise to cerebral spasms which may become tetanic. It increases reflex irritability, and according to Gaethgens, accelerates, by irritation of centers located in the medulla oblongata, respiration and blood-pressure. Vernin, which was found by Schulze and Bosshard, is a new xanthin substance with effects similar to those described above. Sphacelinic acid (spasmotoxin, sphacelotoxin) so called by Kobert who first studied and named it, when absorbed in the intestine causes a hyaline degeneration of the blood-vessel walls, which first contract and finally dilate, also coagulation inside the vessels with consecutive gangrene. In proportion to the doses taken it causes paresthesia, alopecia, falling out of the nails, and gangrene of the skin or of the extremities. Fortunately, it is easily decomposed, so speedily indeed that ergot a year old contains none at all. The effective principle is cornutin, found and named by Kobert. What Tanret called ergotinin is chemically identical with it, but does not equal it in efficiency when prepared according to Kobert. It is easily decomposed when exposed to light or air. There is but little of it in ergot, all the alkaloids forming but 0.2 per cent. of the drug. It irritates the medulla oblongata, contracts arteries, increases blood-pressure, and contracts the unstriped muscular fiber in general. It is employed as a citrate or a chlorid. Kobert speaks of it as enclosed in capillaries holding 0.005 for subcutaneous use, or in pills of 0.002. In Merck's index, "cornutin" and "cornutin citrate" are enumerated. In poisonous doses it causes convulsions and contractures, also toxic polyneuritis, such as follows overdoses of arsenic, lead, phosphorus, alcohol, or mercury. Ergotinic acid, called sclerotinic acid in its impurer state, lowers the blood-pressure in animals. Before knowing better, I recommended it even in my "Therapeutics" for subcutaneous injections to obtain the effect of ergot; that was a serious mistake. In the intestinal tract it is decomposed, and under the skin it is painful and irritating.

All of these constituents lose their power while in the ergot, from month to month. It should be gathered before the rye is perfectly ripe for harvesting, but generally is not. The decomposition of the grain is mainly due to its large percentage (39) of fat; that is why a salutary effect is often missed and the opinions in regard to the efficiency of the drug differ. The effect of the extract or fluid extract depends on the retention of the cornutin. All such preparations as are deprived of the substances soluble in alcohol, are deteriorated thereby, for it is the active alkaloids that are soluble in alcohol. In the fluid extracts the alcohol should be strong enough to hold the alkaloids and dilute enough to dissolve but little of the fat. As far as I am concerned, I have employed for internal use, whenever possible, the solid alcoholic extract of the pharmacopœia. It seemed to me to give better results than even Bonjean's ergotin, which has been in the market since 1842. At all events, the value of ergot preparations is in their undecomposed alkaloids; everything else is either indifferent, disturbing, or injurious.[1]

The effect of ergot and its preparations, when given in medicinal doses, is mainly spent on the unstriped muscular fibers. Its effect on the uterus has been known and used and abused a long time. The muscles of the vagina were found to be influenced by it by Swiecichi.[2] That is why I felt encouraged more than forty years ago to administer it in conditions of hyperemia and of the acute and subacute inflammations of such organs whose blood-vessels are not entirely or almost deprived of muscular layers. The media of small arteries has unstriped muscular fibers. There are several of these layers in the larger ones, which besides are supplied with elastic fibers. This structure is uniform in all the arteries of the body. The veins, however, exhibit more startling differences, nowhere more than in the tunica media. It consists of circular muscular fibers, elastic network and fibrillar connective tissue, is best developed in the v. poplitea and the other veins of the lower ex-

[1] Read at the Annual Meeting of the American Climatological Association at Bethlehem, N. H., September 1, 1898.

[1] Kobert, "Lehrb. d. Pharmako-Therapie," Stuttgart, 1897, p. 502.

[2] Quoted by Kobert, "Intoxicationen," p. 185, 1893.

tremities, less in those of the upper extremities, still less in those of the abdominal cavity. It is *absent*—and here is an important point—*from the veins of the pia and dura mater*, of the retina and the bones, the vena cava, and all the veins emanating from the capillaries, where the media consists of transverse and oblique bundles of connective tissue only.[1]

As I said, the veins of the pia and dura have no muscular fiber in the media; moreover, in the cranial cavity they are long and distant from their arterial pressure-supply. That is why I am never surprised when the employment of ergot in brain disease is wholly futile. Circumstances are different in connection with the spinal canal. The veins of the cord and its membranes are no better supplied with contractile elements than those of the cranial cavity; but because of their shortness they are under the immediate influence of blood-pressure. That is why ergot, so useless in brain disease, is perfectly adapted to cases of spinal hyperemia, or to acute, or subacute spinal inflammation.[2]

The practice of employing ergot in spinal cases was gradually developed. In a report published in the *New York Medical Monthly*, during the years 1860 and 1861, on my clinic of the diseases of children in the New York Medical College, then in existence, you may find a few of my earlier cases in which I employed ergot for the purpose of contracting blood-vessels and relieving hyperemia and inflammation in spinal diseases.

Number 68 is a case of acute poliomyelitis; number 122, one of spinal meningitis; number 167, one of spinal hyperemia. So far as I know they are the first I published after some years of experience with the drug. In regard to the latter disease my information was obtained from a friend who at that time was stationed at the Emigrant Hospital of Ward's Island, Dr. Francis Simrock. Some histological considerations encouraged me besides in employing it in this way. The capsule of the spleen consists of dense and hard connective tissue, unstriped muscular fiber, and an elastic network. It sends off numerous processes, leaf- and string-like layers, into the interior of the spleen, thus forming a coherent network which contains the pulp. This network also contains, besides connective tissue, copious unstriped muscular fibers. Thus it seems there is no organ in the animal economy more amenable to the action of a muscle-contracting agent.

The employment of ergot in moderate doses has no dangers under most, ordinary circumstances. I have used it these forty years extensively, for weeks and even months in succession, without a single case of intoxication. The latter has frequently been observed in all countries of Europe, mostly in the past. If we hear of epidemics or endemics of ergotism, there are but few countries in which they are often met with, *viz.*, Spain, and still more, Russia. With the increase of civilized agriculture and a slight improvement in the general condition and nutrition of the population, the average of good rye increases, that of ergot decreases. In every harvest of corn there is some ergot; one per cent. is common and not attended with danger. But when a population is starved and subjected to malaria and other infectious diseases, and unclean and sleepless from hard work, starvation, and anxiety, and when they are fed on rye with a large percentage of ergot, and particularly when it is of recent growth, during and a very few months after cutting, ergotism may make its appearance.

There is danger in poisoning only, not in medication. In connection with malaria there are two organs we have to consider when medicating, the blood and the spleen, the former because it contains the sporozoa, the latter because of its sponge-like mass in which it harbors the infected blood and serves as a receptacle of dangers. It appears that a direct effect on the blood or on the plasmodia is not required for a cure, but that gradually the restoration of the spleen to a fairly normal size, forcing the stagnating blood into a normal circulation with progressive elimination of the plasmodia is sufficient to open the gates to recovery. That is what I believe I have often done by giving ergot in malaria.

The uncertainty of the effect may also be due to the fact that most preparations of ergot contain both ergotinic acid, which lowers arterial pressure, and cornutin which contracts the arteries. All of this should impress us with the necessity of using the alkaloid cornutin when it is obtainable. Even this substance should be used with great care, for in-

[1] Ph. Stoehr "Histology," seventh edition, p. 91.

[2] In hemorrhages, such as those of the lungs, ergot has long been used by some with great confidence, by others with indifferent success. Among the latest preparations is ergotinol, of which 1 c. c. corresponds to a gram of extract of ergot, which Vosswinkel eulogizes highly in pulmonary hemorrhages when used subcutaneously. Some think highly of ergot in all sorts of inflammatory processes. There is Croq of Brussels, for instance, who employs it in tuberculosis. In his opinion the tendency of tuberculosis is rather that of getting well, unless complicated by inflammatory processes to counteract which no medication seems to be more indicated than that of ergot. Certain forms of spermatorrhea and nocturnal enuresis connected with muscular incompetency of the sphincter are frequently benefited. Here its effect may be the direct one on the unstriped fiber, or on the spinal center of the sphincters which must be taken to be present in the lumbar cord along the uterine and spermatic centers. It has been given in Graves' disease for the same reason, not to speak of, for reasons unintelligible to me, its use in non-pancreatic diabetes mellitus, sea-sickness, and whooping-cough. In the paralytic form of hemicrania it has been highly recommended, and may be all of us have employed it. In tabes, spastic spinal paralysis, in progressive bulbar paralysis, it has been used because of the supposition that the anatomical lesion is attended by dilatation of blood-vessels. The results are but few or none. At all events, no physiological effect can be expected except in the initial stages when there still is or may be spinal congestion.

stance, in hemorrhage, which may be increased by heightened blood-pressure.

Case I.—A Hungarian boy, aged five years, just arrived in the country, October 10, 1859. Had fever and ague, mostly quotidian attacks, at his home. On the ocean he was better, *viz.*, now and then he had a day without an attack. He was pale, waxy, with extensive hemic murmurs and with albumin in the copious and watery urine. His spleen extended nearly to the spina anterior superior. Had regular daily attacks with great prostration, in spite of quinin and Fowler's solution. Of the former he took from 6 to 12 grains daily. Being previously constipated his bowels had been attended to. Not being acquainted with the fluid extract—perhaps it was not even in the market[1]—I gave him an infuso-decoction, prepared with sulphuric acid, of half an ounce of ergot in 10 ounces of water, of which he was to take one-half tablespoonful three times a day. There being no improvement he took, after four days, the same dose five times a day. When I saw him ten days later he had been without an attack three days. The doses were continued five days, then for five more days four daily doses were given, and thereafter but three. During all this time he had no attacks of fever, albumin became less, but his spleen was still as large as before under percussion and palpation. Finally he was removed from South Brooklyn where Gowanus Bay was as pestiferous at that time as the shores of the River Theiss, and gradually with the use of iodid of potassium, iodid of iron, and the occasional resumption of ergot, he improved. After a year I saw him again, looking well but pale, with no albuminuria, hardly any murmur, but his spleen still palpable 3 centimeters below the border of the ribs.

Case II.—His brother, sixteen years old, gave me a new experience. He had the very same symptoms exhibited by his brother—hydremia, tumor of the spleen, etc., without albuminuria and without the history of chills. For the latter reason he had taken no medicine whatsoever. After purging him gently I ordered the same medicine to be taken in tablespoon-doses four times daily. Two days after beginning his treatment he had a very violent chill followed by perspiration; no temperature was taken, as he was miles away. He had another violent attack the next day, a milder one a few days after this, and then no more. He was treated like his brother, with the same slow but finally satisfactory result.

Case III. — A. W., male, fourteen months old. Was seen by me October 1, 1880. Was breastfed until half a year previously, then fed on mixed food. Had diarrhea in the summer, and fell ill with pneumonia of the right side a fortnight before I saw him. This was watched carefully; I found but few remnants of it. But in the beginning of the second week the baby was taken with a convulsion, high fever and vomiting, lips and fingers were bluish. After a few hours the condition improved, but on the following day, blue nails, high temperature, followed by apyrexia, and great debility were noticed. No return of pneumonia; no nephritis. Quinin was given in repeated doses for several days. No convulsion returned, but there were temperatures up to 102° and as low as 97° F. every day. The urine was pale all the time; more was passed during the high temperature, none during apyrexia. On October 1st this condition, of somewhat elevated temperature every day, which lasted a few hours, continued in spite of from 30 to 40 cg. of sulphate of quinin. There was no apparent reason for changing the medication, but care was taken to give the quinin doses during apyrexia and not within the last three hours before the expected attack. Up to October 5th there was hardly any change in the daily recurrence of temperature. The spleen became palpable and appeared sensitive on pressure; meanwhile no anomaly of heart, lungs, or kidneys. Quinin was then stopped, and fluid extract of ergot given in six, after five days, in five, after ten days, in four, daily doses of 10 minims each. On and after October 7th, no attack of fever; on the 10th the spleen could no longer be felt. Ergot was continued to November 15th, and Fowler's solution and syrup of the iodid of iron were given from October 15th to the end of the year.

Case IV.—Mrs. M., thirty one years old. In moderate health until the summer of 1890, though she lived in East 117th street, New York, a hot-bed of malaria even at the present time, until August when she moved to Brooklyn. The only exception to her average health consisted in neuralgic pains of uncertain duration, and at irregular intervals. Left hemicrania she had had for years, neuralgia of the left upper extremity during the summer; and for several weeks before she presented herself on November 24, 1890, neuralgia of the right lower extremity, posteriorly. This pain grew worse from slight pressure; deep pressure would diminish it. She had an extensive and loud systolic, a mild diastolic murmur, no enlargement of the heart, pale lips and conjunctivæ, and a small pulse of eighty. She had suffered from chills and fever since September; the tertian type had changed into the quotidian after a week; later she had two attacks a day. They would intermit now and then after heavy doses of medicine. During the previous fortnight she had taken 400 grains of quinin, and had almost daily attacks; she had a chill with a temperature of 104.4° F. in my office. Her spleen was 15 cm. long, 8 cm. wide, and sensitive over such of its surface as could be palpated. She was ordered to go to bed for at least a week, and to take 0.5 of calomel; at the same time a teaspoonful of Squibb's fluid extract of ergot four times a day in whisky and water. When after three days her chills continued, the dose was given six times a day, and no chill occurred after the fifth day until she presented herself on December 3d, nine days after her first call. Her spleen was 3 cm. shorter and less sensitive. She then was ordered 0.75 of sulphate of quinin once every fifth day in the forenoon, and the ergot was continued in the same doses. On Decem-

[1] Dr. E. R. Squibb, in a letter dated September 21st, has kindly informed me that it was first prepared by Professor Wm. Procter, Jr., of Philadelphia in 1857 ("Proc. Amer. Pharm. Asso. for 1857," p. 130, and 1859, p. 271), and by himself since 1859.

ber 7th she had a slight chill while still in bed in the morning. On December 10th, the ergot was reduced to 15 c.cm. a day, in four doses; on the 20th to 10 c.cm. On that day her spleen could still be felt slightly below the ribs. The quinin was continued to about the middle of January, the ergot another month afterward. At the same time, from December 20th to the end of January, she was given iodid of potassium, 5 grams, three times a day.

CASE V.—M. H., twenty-six years old. Was admitted November 11, 1897, and discharged December 6th. Was a moderate drinker and not venereal. Had no previous sickness. After a two-weeks' sojourn in the South in September he had one morning a chill which lasted one-half hour, and was followed by perspiration. Such attacks he had every other day for two, then every day for three weeks. Quinin was taken and the type of his fever became tertian again. Lately, while he was still taking quinin,—mostly, he said, when the chill came on and enough to affect his hearing,—the type of his fever became mixed, sometimes every day, sometimes every other day, with a few intervals of some days. On the 11th of November his temperature was 100.4° F. at noon; a chill came on at 2 P.M., with a temperature of 103.2° and 104.4° F., which sank gradually. His spleen was quite tender on pressure below the ribs, and up in the seventh intercostal space, and was about 13 or 14 cm. long, as revealed by percussion. Plasmodia were found in large numbers. Squibb's fluid extract was given in four daily doses of a teaspoonful (4 c.cm.) each. The highest rectal temperature of November 12th was 100.8° F. at 2 P.M., of the 13th, 99.4° F., of the 15th, 99.2° F., 16th, 99.8° F. No chills. Did not feel quite well on the 20th, and was given a few teaspoonfuls of sodium sulphate. Highest temperature 99.6° F. at 8 P.M. Because of indigestion, with coated tongue, took sulphate of magnesium on the 21st. Temperature 101.2° F., but no chills. Spleen smaller, less sensitive, plasmodia still found occasionally. Highest temperature on the 22nd, 101.8° F., on the 23rd, 102.2° F., on the 24th, 101.8° F., on the 25th, 100° F., on the 26th, 99.8° F. During all these days he never had abnormal temperatures like those he exhibited while under the uncontrolled influence of his malaria; but normal they were not. Evidently the rise extending over days was due to an additional, probably, gastric influence. About this time plasmodia disappeared from his blood. He remained under observation more than a week, and was then discharged.

CASE VI.—T. B., twenty-eight years. Admitted May 10th. Had had syphilis nine years before, gonorrhea several times; was otherwise healthy with the exception of slight colds; drank "some." His feet had been swollen a little for seven months. During the previous three months had had chills and sweats, off and on, he said. Took a great deal of quinin, almost daily, which helped him. Temperature on admission 101.4° F., pulse 118, respiration 28; pallor, anemia. Sibilant and sonorous breathing over both lungs, anteriorly, breathing diminished over base of left lung posteriorly, with subcrepitant râles and dulness. Liver flatness from sixth rib downward to below the costal border; the organ was felt nine centimeters below it in the parasternal line. Spleen extended from the seventh rib in the axillary line to the crest of the ilium and to within 2½ centimeters of the median line. No edema, no ascites; kidneys negative; axillary lymph bodies slightly enlarged. Plasmodia found pigmented, flagellated, segmented. Fluid extract of ergot 4 c.cm. four times a day on and after the 12th of May, preceded by a dose of calomel and sodium bicarbonate on the 10th. May 15th: no chill since; no diminution of size of spleen, which feels a little softer. May 23rd, was up and about all the week; no paroxysm, spleen softer, no flagellated and no segmented plasmodia. Had no paroxysm to the end of the month; at that time no plasmodia, and spleen was less tense and shorter by almost three centimeters.

These cases are selected almost at random from my records; a great many were never recorded, since my experience with the drug was no longer doubtful. In connection with the subject I may here state that my success with ergot in chronic and relapsing malaria encouraged me to try it in many cases of acute malarial infection. I am certain that many such cases will respond to the action of ergot, but in the average case less rapidly than to that of quinin. Indeed, these experiments were made for the sole purpose of observation.

CONCLUSIONS.

1. There are cases of chronic intermittent fevers with large tumefaction of the spleen, that after having resisted the action of quinin, arsenic, methylene blue, eucalyptus, and piperin are benefited by ergot.

2. When enlargement of the spleen is not old and not firmly established the contracting effect of ergot is noticed within a reasonable time.

3. The attacks will disappear before the diminution in the size of the spleen is very marked.

4. Though temperatures, after the employment of ergot, remain irregular and now and then somewhat elevated, chills, as a rule, are not noticed with this elevation.

5. Plasmodia do not seem to disappear from the blood so rapidly as they do after quinin, when the latter is effective. But even while some are still present, the attacks being more or less under control, the patient will feel better.

6. Complicating local pain requires additional treatment with ice, or cold douches, or heat; chronic hyperplasia demands iodid of potassium or iodid of iron. Digestive disorders may indicate, as they often do, when quinin is expected to act,

before the employment of ergot, an emetic, or a purgative, or stomachics.

7. An experience extending over forty years in which I have used ergot in many instances, justifies me in asserting at least this much: that there are many cases of chronic malaria, apparently intractable, that will get well with ergot.

8. There are cases, occasionally, in which the return of elevations of temperature after the successful use of ergot makes the combination of ergot and quinin, or ergot and arsenic advisable, though quinin and arsenic had not been successful previously.

9. Ergot, like quinin, probably by its sudden contracting effect on the spleen, and by the forcing of large quantities of plasmodia-laden blood into the circulation, is, in chronic malaria when hydremia and spleen tumor are excessive, capable of bringing on the very first attack of chills and fever.

10. Recent cases of malaria have got better, or were improved under the extensive use of ergot, but many resisted a long time; that is why acute cases should rather be treated with quinin.

Discussion.

Dr. Beverley Robinson of New York said: If we look back I think we must all be of the opinion that probably blood-vessels in the different organs are affected; they seem to have a notable effect upon the malarial condition and, I should imagine, through the diminution of the size of the spleen in old malarial cases. The probability is that quinin does have some contracting influence on the spleen itself in addition to any particular effect it may have upon the blood. With that I can understand that there is a rational view with regard to the action of ergot in its effect on the size of the spleen, and when the spleen comes to be contracted the malarial condition is fatally affected.

I would like to speak of something that I am extremely interested in, and hope some of the gentlemen present will be good enough to give their opinion. In a paper before the New York Academy of Medicine I called attention to the use of the tincture of bark in repeated doses and spoke of cases in which it had been notably useful. The cases were pretty closely observed in hospital wards and in my practice outside. If any of you have not read Huxham's original work on the treatment of fevers, and his remarks with reference to the treatment of malarial fever, I think you will be very much interested. It was published more than a hundred years ago and he gives the formula now used. He attributes a certain amount of merit to snakeroot. I believe we are getting away from facts which are of very great value. We are disposed to believe a little too much in using our alkaloids, because they are useful and are so easily administered. The bark itself is of very great benefit. I think there is a rational basis of belief that the bark itself will be of use in removing the poison of malaria. The bark must be given in many of these instances if one wishes to secure the best effects. I would refer to one preparation by a firm in the West, Parke, Davis, & Co. Compound fluid extract of cinchona is nothing more than the compound tincture of cinchona with five times its strength, so that if one gives 5 or 10 minims of the compound cinchona he is giving five times the strength of the tincture. I have found it a very useful way of giving the bark and have obtained very good effects from it.

Dr. R. G. Curtin of Philadelphia said that the treatment of malaria by ergot would be a valuable addition to any specific treatment, by not only helping to keep down the size of the liver and spleen during the acute attack, but also by preventing the subsequent chronic enlargement of these organs.

Dr. Judson Daland of Philadelphia said: I have listened with great pleasure and profit to the remarks made by Dr. Jacobi in reference to the action of ergot in malaria, and I was especially interested in the observation regarding the influence of the drug on the spleen. In regard to those cases of malaria uninfluenced by quinin, so far as Philadelphia is concerned, we have very few cases that do not yield to the action of this drug. Along the Gulf States, more particularly in Louisiana, I am informed, a number of cases have occurred in which quinin has not exerted its usual beneficial effect.

One year ago while in Tiflis, at the Civil Hospital, Professor Gurko informed me that frequently they receive cases of malaria from the neighborhood of Batoum, on the Black Sea, which are influenced by large doses of the bichlorid of quinin administered by the mouth and hypodermatically. He stated that in the few months preceding he had treated in this way six cases. The cases had been accurately studied, the parasite had been pictured, and these pictures were shown me, and of the six cases five had resulted fatally. He also stated that many of these patients present symptoms of typhoid fever before the parasite is found in the blood, but other examinations have showed the affection to be malaria and not typhoid fever.

The use of quinin in malaria as we see it in Philadelphia sometimes fails to give results in cases unquestionably malarial, for several reasons. I recollect two such cases in the Philadelphia Hospital where the patients had malaria as demonstrated by the presence of the plasmodium in the blood. Quinin was given in sufficient quantity, but most of it was recovered in the stool, and I have no doubt that in many cases of malaria the quinin is either insufficient primarily, or the pills are old and hard and only partially dissolved, or it is in capsules that are old and pass the pylorus and probably escape in the feces without the organism being impressed with this salt of cinchona. With the detection of the plasmodium of malaria, the number of cases of malaria in Philadelphia has rapidly decreased, until at the present time, except those cases coming from the Eastern Shore of Maryland and other malarial points, the disease is practically a rare one, and on an aver-

age in not one case in ten that are examined where the diagnosis of malaria has been made has it been verified by an examination of the blood.

Reference was made to the time of giving the drug, which is a matter of some importance, and it would seem as though, from what we now know of the disease, that the plasmodium is most exposed to the antidotal action of the quinin at the time when it has become the matured malarial body, floating free in the blood. It is quite evident that when the plasmodium is within the red blood-corpuscles quinin in solution in the plasma will not be able to exert its antiperiodic effect, but when the body breaks through the envelope of the red cell and enters the circulation quinin promptly destroys the parasite.

I would like to call attention to one case which unquestionably would have ranked a few years ago as a case of malaria. The patient had intermittent fever, occurring daily with the customary symptoms of the paroxysm. Examinations of the blood, urine, and viscera gave negative results. Examinations were repeated. The urine showed no change. The autopsy showed suppurative kidney with calculi impacted in the ureter. It would seem as though these calculi temporarily occluded the passage of urine from the diseased kidney, but when the accumulation of urine became considerable, dilatation of the ureter took place, and partial escape of the contents occurred. The urine that upon examination gave negative results was probably secreted from the healthy kidney, while there was temporary obstruction of the left ureter. No distinct tumor could be found, although while examination was interfered with by the obesity of the patient, swelling was detected in the left renal region.

Regarding the action of ergot upon the essential poison of malaria, I doubt very much whether it has this effect. I personally have not had much experience in the use of this drug, for the reason just stated. As a rule, the disease as presented in Philadelphia yields to quinin. The poison that produces the paroxysm seems to be the result of the gradual maturing of the parasite of malaria, and at the moment of its maturity there seems to be thrown into the blood a chemical poison, this seeming to initiate the paroxysm, and I doubt whether ergot has any special influence over this low form of animal life.

DR. DIDAMA of Syracuse, N. Y., said: I live in a region which used to be swampy, and chills and fever were prevalent. Nearly forty years ago physicians treated the cases there by first giving something, such as calomel, to prepare the system to take the antidote of the poison. We knew nothing about bacteriology at that time. I could not see why we should not give an antidote at once, and so at that time I commenced giving that which I have been giving ever since. There was a tendency for the chills and fever to return in about seven or fourteen days. Then in order to prevent that return I thought I would repeat the medicine about every six or seven days, so I would give the patient ten or eleven powders, each one containing 4 to 5 or 6 grains of quinin with piperin and some sulphate of iron. I have never varied the size of the dose from that day to this. The patients took the powders without any reference to what time of day the chill occurred. They took one in the morning and one in the afternoon or toward evening. A few of these powders were put up in blue papers, and the patient was to take one of these every Sunday morning for three or four Sundays. The men kept at work as usual, but there was no return of the disease that season. The next season they might have it again, and it was cured in the same way. I have had from 200 to 250 cases a year. Patients in Michigan took the same medicine with the same result. There were some cases which I did not see early enough. In those cases of chronic malarial poison with enlarged spleen this treatment does not act as well, and I am glad that Dr. Jacobi has told us what he has about the ergot in eliminating the poison from the spleen.

DR. JACOBI, in closing the discussion, said: There is no doubt that there are cases of malaria which do resist quinin, as there are cases that do resist arsenic, or quinin and arsenic together. I have seen them. If any man says he has not seen them (a great clinician whom I much admire rebukes those who do not succeed with quinin in every case), that is his luck and not mine. The spleen, of which we know almost nothing as yet, has certainly a great influence in harboring germs and in being the cause of the relapses not only in malaria, but in other diseases. I remind you of what we can all see in typhoid fever. I know that in a case of typhoid fever in which on the sixteenth or seventeenth day the spleen does not diminish in size there will be a relapse, or rather a continuance of the illness. In those cases in which the spleen diminishes in size about the sixteenth or seventeenth day, one is fairly certain that with the usual care there will be no relapse. That is one of the instances of which I can feel tolerably sure as a matter of experience, which is, that the spleen certainly has a great deal to do with the relapses of typhoid fever. So in malaria; if I succeed in reducing the size of the spleen within a reasonable time I feel sure that the malaria is under control, but in fever districts in the South as in the North, in the swamps, there are cases that will not easily get well. There are also those very obstinate cases in which the spleen grows very slowly for weeks and months, until finally cachexia is the first, and the "chill and fever" only the second, symptom. These cases are very apt to resist the influence of quinin. The practice Dr. Didama speaks of, of giving calomel before giving quinin, and getting the stomach in good order, is a very good one, mainly in these old cases. There are those in which quinin will not act until the stomach is put in good condition for absorption, by a purgative or otherwise; sometimes by an emetic or irrigation of the stomach, always by stomachics.

Regarding the preparations that I have used, I can say that I have not given a single sugar-coated pill for thirty years. I seldom prescribe drugs even

in capsules, because I know capsules may pass through the intestinal tract. I generally use powders in preference to anything else because I feel tolerably sure the quinin will then act. I order solutions only for those who do not mind the taste.

To-day I simply state to you my observations made during forty years or more, that there are cases of malaria which, after not getting well with quinin or with arsenic, do gradually get well with ergot. Now, there is no reasoning against that. If you always cure your patients with quinin only so much the better for you. I did not always succeed. In my failures I often succeeded with ergot. If some one does not see why that should be so I cannot to-day disperse his doubts. It is not the first time nor the last that empiric facts have collided with our insufficient information, and that theoretic reasons would come limping behind actual observation. I have tried to suggest the way in which ergot may prove effective in malaria; maybe a better interpretation of its action may be found. I believe I am on perfectly safe ground when I display my clinical observations, which, as I said, extend over forty years.

THE USE OF OBSTETRIC FORCEPS WITH REPORT OF TWO CASES OF INVERSION OF THE UTERUS.[1]

By J. F. COLE, M.D.,
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PROBABLY no one subject is of greater interest to the general practitioner than that of how to handle difficult and tedious cases of confinement to the best interests of his patient. Not all physicians are adapted to this art; due to the fact that some do not like the work, and others lack confidence in their own ability. Many physicians abuse the use of forceps by applying them when not indicated, and producing serious damage to the mother as well as to the child. To properly understand the use of the instruments one must make a careful study of the different presentations of the child, as well as the peculiarities of the patient, such as stenosis of the cervix and deformity of the pelvis, abnormally developed fetus, etc. In normal labors with a roomy pelvis and a normal fetus, we do not need the assistance of forceps but do better by letting Nature take its course with occasional manual aid such as support of the perineum, slight pressure over the uterus, etc. But the question pregnant with vital interest to all practitioners is how to handle abnormal cases. This is a question of great importance, but how often do our authors neglect to give us a complete detail of how and when to act, and pass the subject almost unnoticed, especially as to its main technic! How many of our college graduates are there who do not know how to use the forceps correctly? How many there are who do not look after the sanitary condition of the lying-in-room, or the cleanliness of the bed and person of their patient, or in fact of their own personal cleanliness!

Now what are the indications for the use of forceps in confinement? (1) A small or irregular-shaped pelvis; (2) a large child and an abnormal presentation; (3) an alarming hemorrhage; (4) signs of failing strength or exhaustion; (5) convulsions; (6) when the presenting part becomes fast in the pelvis and labor pains are ineffectual; (7) when the interest of the mother and child requires a speedy delivery. All these propositions are, however, subject to the limitation that in the selection of the mode of delivery choice should be made especially looking to the maternal safety. Fortunately in the majority of the cases the interest of the child and mother are identical.

In preparing for the use of instruments it is always best to place the patient crossways of the bed, to elevate the head slightly and have the hips well over the edge of the bed, to wrap the limbs in a clean sheet or towels, then have a capable assistant give an anesthetic (chloroform preferable), while you carefully cleanse your hands and prepare your forceps. When the patient is fully under the anesthetic dip your forceps in hot water to remove the chill of the steel and anoint the blades with antiseptic ointment, and having determined the location of the head, apply your forceps so that they will catch it laterally. The blades should be applied by introducing the left blade first, allowing the fingers of the right hand to act as a guide to see that the walls of the uterus are not caught between the forceps and the head of the fetus, and also that the forceps are properly adjusted to the head. Then introduce the right blade, guided by the fingers of the left hand and when properly in position the two blades are easily locked. When the forceps are properly adjusted and locked the next step is to apply traction, which is best done by placing the right hand on the handle of the forceps palm downward, and grasping them by means of a finger on each side of the handle, and the left hand underneath, palm upward. It is advantageous to introduce the fingers of the left hand into the vagina occasionally to determine the position of the forceps, the location of the head of the fetus, and to estimate the amount of pressure on the child's head during traction. Steady traction is always preferable to the pendulum or rotary motion and especially is this true when the rotation of the head is incomplete. Pressure by a skilful assistant on the abdominal walls during traction is here, as in other obstetrical

[1] Read at the Forty-seventh Annual Meeting of the Iowa State Medical Society, held at Des Moines, Iowa, May 18, 19, and 20, 1898.

operations, an adjuvant of great value. Traction should not be too prolonged and when not made in unison with the pains they should not exceed two minutes in duration. The head should then be allowed to recede, for haste in delivery exposes the patient to danger of laceration and post-partum hemorrhage.

The alternate descent and recession of the head afford the best means of softening the external parts and overcoming rigidity; and as the head advances time should be given for the uterus to contract upon its contents, for when the pains are deficient the contractions, after too sudden emptying of the uterus, are apt to be improper or of short duration. Traction should at first be made downward until the head has descended well below the symphysis pubis; then horizontally until the occiput appears at the vulva. If in doubt as to the direction of traction hold the handles loosely in the hand during a pain to serve as an index of the proper time for traction. If rotation has not previously taken place you can aid it with the forceps, but it usually takes place as the head descends. When the parietal bosses are in the act of passing the vulva, traction should no longer be made. The operator should now stand to one side of the patient with forceps in one hand, and the other pressing against the perineum. Then during intervals of pain, by alternately sinking and raising the handles, the perineum and vulva can gradually be dilated. So soon as the convexity of the perineum is marked and the parietal bosses press on the commissure, it is best to sink the handles during a pain so as to flex the head to its greatest extent and cause if possible the vertex to present. When the vulva is sufficiently dilated raise the handles toward the abdomen, complete the extrusion of the head and complete the delivery. Some authors advise the removal of the forceps before the head is delivered and as soon as you can grasp the chin with the index-finger introduced in the rectum, but I prefer to leave the forceps adjusted until delivery of the head is completed, and find great advantage by placing two fingers over the forceps and under the symphysis pubis as a fulcrum around which the blades can be safely rotated.

I am not much of a believer in the high application of the forceps when the head at the brim is yet really movable, but would in these cases recommend version because it is more easily done and a much safer procedure, yet there are cases where this cannot be done. In these cases I would advise the forceps of M. Tarnier. In the high operation the finger should always guide the blades between the cervix and the child's head with greatest care, so that if possible, the head may be seized in the transverse diameter, instead of applying the forceps regardless of the position of the child's head. As a rule it will be found under the conditions mentioned that the head has been seized obliquely, *viz.*, with the posterior blade over the parietal prominence and the anterior blade near the coronal suture. In this case you cannot closely approximate the handles, and you should only use enough compressive force to keep the forceps from slipping. To adjust the lock often requires considerable patience and in many cases a great deal of pressure, even when the forceps have been applied by strictest rules of the art. It will not infrequently be found that the upper border of the anterior blade and the lower border of the posterior blade will project beyond the scalp-tissue and unless managed with great care the exposed edges are liable, during extraction, to cut deeply into the tissues of the parturient canal. When the os is only partially dilated, the forceps should be used, not as extraction instruments, but simply to bring the head down against the cervix to expedite dilatation. In this great care should be taken during a pain to see that there is not too much tension upon the firm and unyielding os externum, and thus avoid a troublesome laceration of the cervix. When dilatation is complete and the head is brought down into the outlet of the pelvis the mechanism is the same as in other cases.

In cases of occipitoposterior position it is always best to refrain from using forceps as it prevents rotation, yet there are cases in which it is justifiable, *viz.*, when speedy delivery is required for the welfare of mother or child. In these cases it is best to apply forceps to the sides of the child's head and to imitate the mechanism of normal labor in posterior positions. If the sagittal suture occupies an oblique diameter the forceps should be applied in the opposite oblique diameter, as the occiput should be rotated into the hollow of the sacrum. Then the lines of the traction are the same as in the vertex, only that the face instead of the occiput rotates under the arch of the symphysis pubis. In face presentations when the presenting part is deep down in the pelvis and the chin has rotated to the front, application of the forceps is easy and does not differ materially from the procedure in presentations of the vertex. Traction should then be made horizontally until the chin has been brought well under the symphysis pubis, when the handles should be raised to lift the cranial vault over the perineum and thus prevent serious laceration. In the oblique mentoposterior positions, Speigelberg recommends the introduction of the posterior blade first or the one corresponding to the chin, as in adjusting the second blade and locking the forceps, spontaneous rotation nearly always

takes place. In deep transverse positions defer the use of forceps as long as possible as a tardy rotation of the chin to the front is a physiologic peculiarity in face presentations. In all these cases the forceps should be applied obliquely with the concavity of the forceps directed toward the chin. Then try to rotate the chin to the front, but if you fail to rotate the chin to the front, traction should not be made, but if you succeed in rotating the chin to the front the forceps should be unlocked and readjusted to the lateral surface of the head to prevent pressure being made upon the neck and throat.

In high transverse positions forceps should not be used as rotation is not then permissible and the blades applied to the neck and thorax on one side and upon the cranium on the other, separates the handles so far that the pressure necessary to keep the blades from slipping is so great that you cannot deliver the child without causing death or great injury. The choice in such cases requiring speedy delivery lies between craniotomy and version, the choice of which depends upon the conditions existing in each particular case.

In breech presentations where no alarming symptoms exist for mother or child, the attitude of the obstetrician should be one of watchful observation, for as a rule the results to the child are far more favorable when Nature does the work unaided, yet the physician should always be on the alert to meet successfully by interference any cause which may produce a delay in breech presentations. The delivery in breech presentations consists of three stages: delivery of trunk and body to shoulders; delivery of arms; delivery of head. The first stage extraction of feet and breech should be made slowly, giving time for contraction of the uterus. The second and third stages should be finished as rapidly as possible and much the same rules must be followed as in vertex presentation, using instruments only when absolutely necessary.

This, in brief, is the mode of using forceps in labor. But much depends upon the cleanliness of the patient's bed and antiseptic precautions of the surgeon as to the recovery of the patient and after-health of the mother. Always wash the parts with an antiseptic solution before applying the forceps; thoroughly cleanse your hands and arms; prevent any infection from your clothes by wearing a sterilized gown; wrap the patient's limbs in wool and cover with clean sheets to prevent infection, and also to keep the extremities warm; have the patient placed crossways of the bed with the hips well over the edge of the bed, with a clean sheet under and over them. Two assistants, one on each side to hold the limbs, and a competent person to give chloroform and you are in readiness to proceed to apply forceps and deliver the child. In a case thus handled and with these precautions the use of instruments is attended by little or no danger to mother or child, in fact it is not so dangerous as to wait until the patient is exhausted or until injury has taken place to soft parts by too long continued pressure caused by the presenting part of the fetus. Hence I should recommend the use of forceps whenever the presenting part becomes fixed and the pains no longer have any effect upon forcing the fetus through the parturient canal or where the secretion of the vagina has ceased and the parts become dry and feverish, when there is no hemorrhage, convulsions, or marked exhaustion of the mother. If we will only follow these precautions, forceps will not be looked upon with fear but will be hailed as a welcome boon to women in labor.

In conclusion allow me to report two cases of inversion of the uterus. This complication is of very rare occurrence, therefore I deem it of sufficient interest to the obstetrician and practitioner to report briefly the two cases which it has been my lot to see. It is one of the most serious accidents that can befall a woman in labor. The inversion may be complete or incomplete; may occur at the third stage of labor or a few hours after labor. Of the cases I wish to report, one was in my own practice and the other in that of a midwife. The production of inversion may be favored by a large relaxed uterus, the result of over distention, of rapid delivery, or hemorrhage. The immediate cause may come from pressure exerted from above or traction from below. It may come from straining, especially in the kneeling position, or from attempts to expel the placenta before uterine contractions have been secured. It may come from a short or coiled cord during labor, from too much traction on the cord after the fetus is born, or from the weight of the placenta itself, and especially is this true when the placenta is attached to the fundus instead of the lateral wall of the uterus. In incomplete inversion you have the saucer or cup-like shape of the fundus. In complete the fundus comes down into the vagina and may protrude through the vulva, the cervix being inverted to its vaginal attachments. The symptoms are shock, hemorrhage, pain, restlessness, pallor of face, a quick pulse, syncope, etc. Shock is marked by small pulse, cold extremities, vomiting, and sunken features. Spontaneous reductions of both incomplete and complete inversion have been reported, but are not very common. The diagnosis is easy for the condition can only be mistaken for a uterine polypus. Prognosis depends upon the promptness of the operator in returning the fundus

to its normal position. Yet, according to the statistics of Crosse, one-third die either at once or within a month of the accident. Treatment consists of pressing the fundus up with the closed fist, counter pressure being made with the disengaged hand upon the upper border of the funnel-shaped depression. If the placenta is detached to any great extent it should be removed before attempt is made to replace the uterus, but if adherent, lose no time, but push the placenta and fundus back together.

CASE I.—After several years of practice, I saw my first case of inversion of the uterus about one year ago. I was hurriedly called to see Mrs. L., primipara, aged twenty-two years, some nine miles in the country. She had been in labor thirty-six hours, and was being attended by a midwife. When I arrived at the house, members of the family and attendants ran out, saying the child was born but the lady was dying. I went in, and found her pallid, nearly pulseless, and suffering from a frightful uterine hemorrhage. An old midwife standing by said, "You must hurry up, doctor, this lady's insides are coming out." I pulled off my coat, rolled up my sleeves, and not waiting to use any antiseptic, made an examination. I found the uterus already protruding from the vulva. Here I was, without any assistance (of any consequence), and my first case of this kind. I saw that I had to act and act quickly, so I placed my left hand over the abdomen, and with my right hand against the fundus of the uterus I began making the uterus retrace the same steps it had taken to reach the condition in which I found it. I finally got the fundus replaced to its normal position, and with one hand in the uterus, and using Crede's method with the other over the abdomen, I finally got a firm contraction of the uterus. While doing this I had the patient given whisky and ergot freely, and as soon as I got contraction I gave her ergotin and strychnin hypodermatically. The patient made an uninterrupted recovery. I used copious injections of hot water and bichlorid solution, gave tonics, and a generous diet. In this case the midwife had killed the child, and had pulled on the cord until she tore it loose from the placenta, and said that the reason the lady was so sick was that she had no afterbirth.

CASE II.—Mrs. M., multipara, aged twenty-seven, was delivered of a hydrocephalic fetus by instruments. The case progressed nicely until the body of the child was passing through the vulva, when a severe hemorrhage occurred. I delivered the child as soon as possible and cut the cord, which was only eight inches long. By this time the patient was pallid, pulseless, cold, and, in fact, in a state of complete collapse. I had my assistant give whisky, strychnin, and ergot hypodermatically at once, and when I attempted to get contraction of the uterus by manual aid I found to my surprise a case of inversion of the uterus, with the placenta well loosened. This I hurriedly removed, and at once proceeded to replace the fundus of the uterus to its normal position by means of pressing the fingers of one hand against the fundus uteri and the other over the hypogastric region of the abdomen to prevent the rupture of any of the parts from the force being applied from below. I was able to quickly replace the fundus, and allowed one hand to remain in the uterus a few seconds, producing contraction by Crede's method, and by the hand in the uterus. When the contractions were sufficient I withdrew my hand slowly to prevent a recurrence of the trouble. The uterus was then washed out with a hot bichlorid solution 1–3000, followed by hot sterilized water. The patient was given a dram of ergot every four hours, tonics, whisky, and well-regulated diet. She made a complete recovery in four weeks, and there is no lesion to mark the occurrence of the accident.

In my first case the fundus was replaced without any anesthetics or assistance (of any consequence); in the last chloroform was used. But when the patient is wholly unconscious and nearly lifeless an anesthetic is not so essential as is speedy work of replacement. Yet, while I was successful in these two cases, I have no desire to see another. The after-treatment should be much the same as in atony of the uterus in post-partum hemorrhage. By carefully but firmly indenting the fundus with one hand and making counter-pressure with the other over the ring-like neck above, carrying the hand up through the os into the normal cavity of the uterus, not only can the reposition of the fundus be secured but it can be maintained.

ADDRESS.

THE GENERAL PRACTITIONER.[1]

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IT has often been said of the essayist or lecturer, "Given his subject and his task is half accomplished." I may be said to be in that fortunate position, because you have been good enough to select my subject for me. On the other hand, this method implies difficulties which are peculiar to it. It may be that with the subject set, a special mode of treatment is expected which the speaker may not hit upon. I may disappoint you in this respect, and should I do so, it will, unfortunately, be too late to mend matters except so far as my extreme regret can atone for any shortcomings.

At the outset we are met with the question, "What constitutes a general practitioner?" Clearly in the broadest sense, he is one who shrinks from no service which belongs to his art. He is at once physician, surgeon, obstetrician, gynecologist, ophthalmologist, in a word, anything which has received a title in the differentiation of professional work. Yet it is evident that it is not pos-

[1] Delivered at the Eightieth Anniversary of the Founding of the Gloucester County Medical Society, September 15, 1898.

sible for any one man to fulfil the requirements of all these offices as demanded by modern medical science and art. Very different was it a hundred years ago. Then one man could do quite all that could be expected of him. Even at that date the larger cities contained men who were especially distinguished for operative skill who did little else but surgery. Such men in their day were Sir Astley Cooper and Sir Benjamin Brodie. Yet the entire field of medicine was reasonably considered as within the province of one man. It is evident, therefore, that some latitude must be allowed in defining the duties of a general practitioner of to-day. Casting about us for the field actually filled by him, we find he is one who practises first of all medicine in its broadest sense, including not only the diseases of children, but also skin diseases. He practises midwifery. In surgery he, for the most part, limits himself to minor surgery, while he is repeatedly called upon to prescribe for the simpler affections of the eye and ear. The more complicated technic which modern medicine has imposed upon the proper treatment of diseases of the nose and throat, demands vastly more time and trouble than the older treatment of these affections, and yet the general practitioner cannot escape it if he would retain his practice, though in the cities this department is largely becoming an exclusive province. It is more than likely, however, that time will simplify the treatment demanded by these diseases. From the surgery possible to the general practitioner, orthopedics is practically excluded, while genito-urinary affections necessarily fall within his province. As intimated, in the cities the major operations of general surgery are practically withdrawn from the field, but in the country this cannot be so, else must life often be sacrificed. The same is true of major surgical operations now placed in the department of gynecology. Hence the term "general practitioner" must include more in the country than it does in the city. The general practitioner of the city is more limited in his work, as much by the will of the patient as by his own selection.

To sum up, then, the general practitioner of the present day is, in point of fact, a man who practises all the departments of medicine as distinguished from surgery; who practises midwifery, surgery, and gynecology, except the major operations demanded by it and by surgery, and who treats also the minor affections of the eye and ear. While this is practically true of the general practitioner of the city, the field must be extended in the country to include all operations, delay in which is dangerous to life. And it is the general practitioner in the country, I take it, you have in mind when you ask me to treat the subject. It is in the country only, in fact, that the general practitioner in the truest sense can be met, so that in a word the general practitioner is the country practitioner. As such, I am inclined to think, too, that the correction of the simple defects in refraction, and the prescription of glasses should fall to his lot. I see no reason, at least, why he should be excluded from this source of revenue. Thus it will be seen that, view it as we may, the field of the general practitioner is a broad one.

Having described the field of the general practitioner, we naturally come to consider his qualifications, and it may be that I will surprise you somewhat in what I shall include among these. A moment's reversion, however, to the numerous duties I have assigned him will make it evident that his attainments to be commensurate, should be correspondingly broad. I have more in mind, too, than that his attainments shall simply fit him for these duties, remembering that the object of life is something more than the simple fulfilment of duty, and that health, happiness, and enjoyment are a heritage to which the physician is as much entitled as other men. To this end I consider that the general practitioner should have the broadest preliminary culture attainable. Much more than the specialist would I clothe him with a broad general culture. I would have him college-bred or the equivalent of college-bred. I would have him able to at least *read* Latin, French, and German, while if he chose to include in his preliminary education the now much-despised Greek, I should regard him as no less fitted to fill the important rôle I have set for him. I would have him well drilled in physics no less than in chemistry, for no one is qualified to understand the problems of physical diagnosis, as set by diseases of the circulatory and respiratory systems without a thorough knowledge of acoustics and hydrostatics, while with such knowledge their understanding is comparatively easy. Equally too, would I have him versed in the natural sciences—botany, mineralogy, comparative anatomy, and zoology—a biologist in the broadest sense of the term; for through such attainments I expect to add to his pleasure as well as to his usefulness, to make his otherwise lonely drives and walks holiday excursions pleasurable and profitable. I would have him well-read in the standard literature of his own and foreign languages, the latter not, of course, in the original, but in the excellent translations which abound; for I acknowledge that the general practitioner has a limit to his capacity for attaining and remembering, but I insist the more on his getting as much knowledge as possible of this kind before entering on practice because while he still may have time to enjoy it after he enters on professional life, he may not have time to acquire it. In a word I would have him equipped with all that will make him accomplished, ready, and versatile, with a view to enhancing his own pleasure and enjoyment, that he may appear the equal as well as the superior of those with whom he mingles socially and professionally. He should be at least the intellectual equal of the most intellectual of his community, the man to whom young and old alike will go for information on subjects on which they are in doubt, as well as for treatment of their physical ills.

On the details of his professional education I need not dwell long, for it goes without saying that he should have the best his money can obtain. Nay more, if he has not enough money to obtain the best let him defer it until he can raise more, if money be the measure of its quality. For a cheap medical education is like a cheap garment; it may serve its purpose for a short time but it soon needs repairs, the ultimate cost of which will far exceed that of a good one, while it is an ever-growing disappointment to its possessor. No medical man needs a broad and

thorough medical training so much as the general practitioner, for no one has such varied demands upon him, no one is so constantly thrown on his own resources. To this end hospital residence in a general hospital for a year at least after graduation should be secured when possible. He should be familiar with the use of instruments of precision such as the microscope, ophthalmoscope, apparatus for the examination of the blood and the testing of ths urine, as well as with the stethoscope and laryngoscope.

We are now ready to locate the general practitioner. Equipped as he has been, he may locate in any community he chooses without fear that he will appear at a disadvantage compared with other citizens of the same town. We will not follow him in the selection of his home, for this is a personality with which we have no concern. His consulting-room should, however, be well appointed with all that will facilitate the examination of patients and the study of disease. A small apartment, or in the absence of this, a corner of this room should be fitted up as a laboratory with the instruments of research and accurate investigation referred to, as well as necessary reagents for such chemical and chemico-microscopical work as he will be called upon to do. Such an outfit is neither large nor expensive, and it is indispensable. A man is much more apt to study a case thoroughly if he is provided with suitable appliances. These should be kept in perfect order, and so placed that no time is lost in getting hold of them for use.

As indispensable as anything in the outfit of the general practitioner and more useful than a horse and buggy, in the days of the bicycle at least, is a neat, bright, quick-witted, intelligent wife. No one but he who has one knows what a treasure such a wife is. Simple beauty of person is something to which one soon grows accustomed. The homely adage that "beauty is only skin deep" is full of meaning, and the qualities referred to make the possessor dearer with every year that elapses. There is nothing that such a wife cannot do. Besides being a cheerful helpmate and loving companion, she will keep our general practitioner's books and help him with his cases, which he will talk over with her, but which she will regard as sacredly confidential. Nay more, she can learn to test urine and even to use the microscope and otherwise help even more than a qualified assistant, because she is actuated by love and a common interest, attributes scarcely to be expected in a paid assistant. On the other hand, nothing is such a drawback to the general practitioner, the man whose work calls him into so many channels, as a careless, slouchy, novel-reading wife. I have known more than one man's life blighted because he was handicapped by such a companion. Nor need he long defer his marriage if she is of the right kind. To marry on nothing is most ill-advised, and I subscribe heartily to the old Greek maxim, "How thrice is he unhappy who marries poor." But the physician who waits until ample means are accumulated before he marries loses the best part of married life, the part to which he will look back with greatest satisfaction in after years of comparative ease and disembarrassment. As soon, then, as he begins to see his way clear to reasonable success, he should marry a sensible, well-educated woman, a little younger than himself.

We now have our general practitioner well educated, thoroughly trained, and well equipped. How shall he attain what is called success? We will not stop to discuss what constitutes success, except to say that it consists neither in wealth nor in power, nor even in health, but in a certain proportion of each of these, fortified by a consciousness of rectitude and the determination to be content with the results of efforts as well directed as he knows how. Then as to what constitutes well-directed effort, no effort of the physician is well directed unless governed by the spirit of the Hippocratic oath; that he will do his best for his patient and sacredly guard the confidences placed in him. We will not ask him to take the oath for we are of a profession that is above oaths, holding that an obligation is as binding without it as with it and that it does not add to the force of such obligation.

We may, however, continue our subject by pointing out some of the methods which judgment and experience have shown to be well directed. First, the general practitioner should establish an office or consulting hour at home and punctiliously maintain it. The office hour is often too much ignored by the general practitioner, and especially by the country practitioner, to whom my mind constantly reverts as the true type of the general practitioner. The most important requirement of an office hour is that it shall be kept. It does not much matter at what time of day it is, so that it is rigidly observed. It is soon found out and greatly appreciated. Doubtless in the country, the evening is more convenient to the patient, but it is important for the success of the office hour that the physician should be fresh and well rested, else the duties of the hour become irksome and are unspiritedly and carelessly performed. Hence the morning is, on the whole, the most suitable—say until nine o'clock or half-past—for your general practitioner must be an early riser as his patients are also likely to be. Then, after his office hours he will still have a long day before him, all of which he will need in order to fill the important and busy rôle we have mapped out for him.

More time still will be gained by a systematic arrangement of work. The busier one is the more important this is. I am certain that at times the general practitioner is too indifferent to this and loses much time in consequence. With an office hour terminating at 9, or at the latest 9.30, he should start promptly on his tour of visits, giving enough time, but not more than enough to each patient. Many practitioners make their visits too long and not only thus lose time, but diminish the respect of their patients for them. Every physician should consider his time valuable, as it really is, because there is always more to do in various directions connected with his present and future usefulness than can be accomplished in a day. He need not, indeed should not, indicate by his manner that he is in a hurry; this is harmful to his interests. On the other hand, he should not loiter, especially should not gossip; for however entertaining or pleasing this may be to the patient, it will not increase the respect of the

latter for him, and may even jeopardize the estimation of his counsel. One of the best pieces of advice I ever had given to me before I began practice, was that of a very dear friend, a lady, who said to me one day, "Doctor, when you begin to practise, do not make your visits too long." She had evidently suffered from the long-drawn-out visits of her doctor. She was a great contrast to another patient, also a woman, of a busy friend of mine, to whom she said when he manifested some uneasiness at *her* prolonged call, "Why, Doctor, you seem to want to hurry me off. My own doctor keeps six horses and he stays an hour at each visit." Further comment is unnecessary.

With work well arranged and no time lost on needlessly prolonged visits, a surprising amount of time will be found remaining over after the daily round is made. The leisure thus obtained should be spent first in clearing up doubtful points in cases by the study of well-selected text-books and current medical literature—his journals. It is surprising how often the attentive reader of journals finds in their pages cases corresponding to his own which will help him to clear them up and often to treat them. On this account the general practitioner should subscribe to at least one first-class weekly medical journal, still better for two published in different cities; though it will be more profitable to read one such journal well than to have two and read neither. It will do him no harm also to subscribe for a journal with a more general scientific purpose, such as *Nature* or *The Popular Science Monthly*. This he may have to skim over but it will still help to keep him interested in natural science. His journals are the means by which he is to be kept in touch with the latest additions to his art and science. One or two magazines devoted to general literature should be found on his table, to say nothing of a good modern newspaper, of which a good abstract of daily news and good editorials should be a feature; for I have already said that our general practitioner will have no time to waste on diffuse and voluminous accounts of events which are contradicted the next day. Abstracts and first-class editorials are what he wants, the latter to be read in the evening if time permits, the former for a few minutes in the morning.

To proceed with our methods, next, or perhaps first, he should make a brief note of at least the important cases seen during the day as far as they may require it. I believe there is no single piece of systematic work which is as useful to the general practitioner as note taking of this kind. It may be said that this is impossible, but it is not. I do not refer to notes of office cases for this is easy. Practice in such noting soon leads to a brevity which greatly facilitates it, and here the loving wife may lend a helping hand, to be replaced by the stenographer as business grows and family cares demand the wife's attention elsewhere. Fortunate is the physician who happens to be a stenographer himself. Much time and space are saved by this accomplishment. One of the most interesting and valuable lectures I ever listened to was by a busy physician who had adopted the method of note taking recommended, not by shorthand, but in the ordinary way. The address was based entirely on notes of cases in private practice taken from the daily note-book to which a few minutes each evening were devoted. Whether such notes are employed for any future purpose or not, the practice is invaluable, leading to systematic arrangement of facts and thought, and developing accuracy of observation which reacts again and again to the direct advantage and usefulness of the one who employs it.

Nor should he omit to spend a few minutes as opportunity offers on current secular literature. A volume should always be at hand which can be taken up when a few minutes of leisure are present. Some one of the numerous inexpensive critical reviews treating of current literature and containing abstracts of the books of the month should be one of the magazines referred to as useful. By means of this he can keep himself informed of what is going on in literature and select the volume to which he is to devote the few odd moments which are always turning up. A volume of poems from an author cast according to the mold of his own taste may be such a volume or be one of two or three which may be at hand to be picked up at such times.

Emphatically our general practitioner should be a member of the local medical society and should attend all its meetings, at first as a listener. For before anything else he wants to win the regard of his fellow practitioners, and he is almost sure to obtain the opposite if he is too ready to seize every opportunity to ventilate his views, which are apt to be regarded as fresh and crude even if they are not. Gradually, as he becomes known by his regular attendance and close attention, he may rise to ask a question or add a few apposite words, increasing their number until he is able to add something from his own experience or even from some other source bearing on the subject. Then he may report an interesting case and ask the views of his fellow members on the subject, and present his own, always modestly and without pretension. Then he will soon come to be a welcome visitor, and later will be wanted to act as Secretary and receive other evidences of the goodwill and confidence of his fellow practitioners which will go to make up the sum of his happiness.

The State and National societies will also claim his membership in due time and it will serve to rub off the cobwebs and keep his mind bright to take advantage of an opportunity of renewing old friendships and mingling with professional friends as well as by listening to papers and discussions. I am not certain that it should be his ambition to attend these latter meetings very early in his career. It will be at least graceful to offer to look after the work of his older confrère while he takes a run to the more distant place of meeting.

But the medical society is not the only place in which he will be brought into contact with professional friends. He will meet them on the road and in consultation, and under all circumstances let his greeting be cordial and his welcome frank and sincere. Jealousies between doctors are the most unjustified of jealousies and yet they are said to be very frequent, especially in the country. I am certain that more than half of these are without foundation, the result of misunderstanding, misrepresentation, hear-

say, and the want of acquaintance. And in the matter of consultation let me give you a word of advice—I say *you* for I believe that most of my audience are general practitioners: Do not be too much in a hurry to call in the consultant from the city. First call upon your neighbor and exhaust the local resources before you send for the specialist from town. You may accomplish as much for your patient, while you will cultivate good feeling and friendship which will react favorably on yourself.

The first duty of the general practitioner is to his patient, but his duty does not end here. He has obligations to the community also in which he lives. My general practitioner, or the one whose picture I am endeavoring to draw, has been educated above the level of the majority of the laity with whom he associates. He has been educated in a direction which gives him knowledge how to guard the health of the community. He should, therefore, take an interest in what concerns it. He should be on the alert to detect violations of hygienic laws, should call attention to such violations and suggest measures for their correction, as well as be ready to advise on matters connected with public hygiene. He should do this in a simple, dignified manner, not ostentatiously or with a desire to exploit himself. It is by attention to these collateral matters so intimately associated with the interests of his patients that he rises above the routinism which hinders his development and prevents his taking the position he deserves among the leaders in his community.

Is the general practitioner to be denied opportunities of social intercourse? By no means. The attainments with which we have equipped him especially adapt him for social relations, and we have seen that it is partly that he may appear at advantage, socially, that we have so equipped him. He will, however, be somewhat limited in this respect. His time is too valuable. I do not see why the general practitioner should not stop for a few minutes in passing the house of a patient for afternoon tea. It will refresh him and brighten him. The same may be said of the evening reception. A prolonged stay at either function he can scarcely afford.

What are the compensations of the general practitioner? The answer to this question depends somewhat upon what meaning is put on the word "compensation." If it means money return then must he often be disappointed, for it is generally conceded that the general practitioner is often poorly paid in money. If, however, he is willing to take as a part of his reward the pleasant consciousness of well-doing his pay is commensurate with his good work. To hold an honorable position in the community and to be looked up to is a privilege for which many would gladly give money, but position such as falls to our ideal is not to be bought. It is only to be obtained from the vantage-ground of the qualifications of the thoroughly educated physician, imbued with the feeling that his calling is a lofty one and that in its unselfish exercise he is approaching a step nearer that estate which has caused him to be compared many times to the gods of heathen mythology as well as to Him who is called the "Great Physician."

The conception I have endeavored to present to you may be called visionary and difficult of realization. I admit that it is a high ideal, and that it may not be attained by each and every one. It may, nevertheless, be the aim of all, and that it is not unattainable is proven by numerous instances. Perhaps the highest exemplification of what I desire to be aimed at was Sir Thomas Brown, the author of "Religio Medici." Sir Thomas was a country practitioner in the strictest sense of the term, and lived in the first three-quarters of the Seventeenth Century (1605–1682), during fifty years of which he practised in the town of Norwich, England, and by his literary productions, of which "Religio Medici" is the most important, exhibited literary attainments equal to the highest of his day. These in no way interfered with his practice, which was very extensive, and many persons came from a great distance to consult him. The Rev. Mr. Whitefoot, his intimate friend for thirty years, wrote of him, "He was parsimonious in nothing but his time, whereof he made as much improvement with as little loss as any man in it; when he had any to spare from his drudging practice, he was scarce patient of any diversion from his studies; so impatient of sloth and idleness that he would say he could not do nothing." Note that his practice was characterized as "drudging," yet he understood most of the European languages, the Latin and Greek critically. "He was so curious a botanist that beside the specifical distinctions he made nice and elaborate observations, equally useful as entertaining." In other respects he fulfilled our ideal of the general practitioner. He left a comfortable, but no great estate to his wife and children, acquired by his own industry. He showed also that even at that early day the medical education had the same liberalizing effect on religious thought that it has to-day, in witness of which, let me read the following extract from his writings: "Nor must a few differences more remarkable in the eyes of man than, perhaps, in the judgment of God, excommunicate from heaven one another. Take our opinions together and from the confusion thereof there will be no such thing as salvation: for first the Church of Rome condemneth us: we likewise them; the Sub-reformists and sectaries sentence the doctrine of our Church as damnable: the atomist or familist reprobates all these, and all these them again. Thus we go to heaven against each other's wills, conceits, and opinions, and with as much uncharity as ignorance do err, I fear, in points not only of our own, but of one another's salvation." These are but a few of the many attainments of this truly great man. For a further account of him I commend to you one of several excellent biographies which are extant. His life and writings should be familiar to every medical man.

Nor does the novelist fail to paint us good pictures of the general practitioner. To say nothing of the oft-quoted Ludgate in George Eliot's "Middlemarch," we have a picture by Sarah Grand in the "Heavenly Twins" of Dr. Galbraith, who, though referred to by the author as a specialist, was really a general practitioner of the type we admire; and the book will repay the medical reader from this standpoint. Elizabeth Stuart Phelps has given us in Dr. Zay an admirable type of the woman general practitioner, albeit she was a homeopath. She

was possessed of all the accomplishments and all of the noble qualities which go to make up our ideal, and her work was full of the nobility of purpose and the happy results which fall to it.

In all word pictures of the physician by lay authors we meet incongruities and errors which fall unpleasantly on the ear of the educated medical reader, but this must be so long as the author is not himself a medical man; and until the latter, at the same time a skilled novelist, furnishes the ideal one, we will be dissatisfied with the physician in the novel., Ludgate is, perhaps, the best, but scarcely better than Dr. MacClure of Drumtochty, as depicted by Ian MacLaren in his beautiful and touching story, "Around the Bonnie Brier Bush," and no discourse on the subject of the general practitioner is complete without a reference to it. Weelum MacLure accords well with our ideal of the general practitioner, having been "chest-doctor and doctor for every other organ as well, accoucheur and surgeon, oculist and aurist, dentist and chloroformist, chemist and druggist." I believe the story of this "scarred veteran in the service of his patients," this self-forgetful doctor, will do more to lift up the heart of the physician than the creation of any other novelist. This may be because, as Dr. Watson informs us, "the character was not a fiction, but based upon the knowledge of four country doctors, either one of whom might have sat for his hero." What a privilege to be a member of a profession in which such men abound; what an honor to be one of those from whom such a type is drawn. Well may we glow with pride at the universal recognition it has received, and while taking new courage from the contemplation of such a life, let us not fail also to allow our hearts to be softened by his example and bear with patience the many disappointments and petty annoyances that beset our daily path.

CLINICAL MEMORANDUM.

SUCCESSFUL REMOVAL OF A ONE HUNDRED AND TWENTY-FIVE POUND OVARIAN TUMOR. CÆSARIAN SECTION FOR DEFORMED SPINE AND PELVIS.[1]

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CASE I.—Mrs. E. A. M., aged fifty-four years, married, seven children; age of oldest child, thirty years; of youngest fifteen years. One abortion twenty-five years ago, and another fourteen years ago. All labors were difficult. Was lacerated when first child was born. Began to menstruate at eleven years of age. Periods were regular, lasting seven days. The flow was copious and was attended by considerable pain. Periods stopped nine years ago but appeared again last spring, and continued with more or less regularity up to four months ago. About one year ago she noticed that the abdomen was enlarging, but for some time previous, the patient is uncertain how long, she had noticed a soft enlargement in the lower part of the abdomen. The abdomen steadily enlarged during the past year, and during the six weeks previous to operation, increased in size very much more rapidly than before. She had severe cutting pains in both sides and over the abdomen when making any exertion, such as in walking. The pains subsided in a few hours, if she was quiet.

Examination of the patient showed an enormously enlarged abdomen, the full extent of which the photograph does not bring out, the lateral enlargement being very marked. The circumference at the umbilicus was 62 inches, the distance from the ensiform cartilage to the pubes 31 inches. Her weight was 265 pounds. The legs and body were edematous. The pressure on the stomach and thorax was so great that she found it well nigh impossible to retain nourishment of any kind, vomiting up any food almost as soon as taken. She suffered greatly from dyspnea, being unable to sleep except in a sitting or semireclining position. Her heart was weak and irregular and the blood-vessels had little tone. I offered her the chance of an operation, explaining to her that there was no chance whatever without one, and only a moderate one with it. She accepted the situation when she became convinced that she could not be cured by means of medicine, and said the reason she had not come sooner was because the doctor who was treating her had promised to cure without recourse to operation.

FIG. 1.

Case of ovarian tumor weighing 125 pounds.

On December 10, 1897, after the usual preparation, assisted by Drs. Lahuis and Freeland, I opened the abdomen and found, as I expected, a multilocular cyst containing a great variety of fluids, that from some of the compartments being as thin and clear as spring water, while some was as thick as gelatine, with colors varying from very dark brown or black, to light amber. The contents of a few cysts resembled fecal matter, both in color and consistency, so much so that for a time I thought I had torn through the bowel. The cyst was adherent to the abdominal wall over its entire anterior portion as well as to the diaphragm, stomach, and omentum. I found it necessary to evacuate the contents before I could separate the adhesions, and after considerable difficulty succeeded

[1] Read before the Michigan State Medical Society, Detroit, May 5, 1898.

in liberating the lower portion sufficiently to find and ligate the pedicle. After cutting this I found it much easier to separate adhesions from the bowel, stomach, diaphragm, and upper part of the abdominal wall. When the cyst was removed, the abdominal wall presented a ragged, bleeding surface, shreds of peritoneum hanging from it. There was quite free bleeding from a few of these where the adhesions had been most firm. The shreds were trimmed off, the hemorrhage stopped by ligatures and cautery, the abdomen washed out and closed in the usual manner with drainage, and the patient put in a thoroughly warmed bed.

The large, flabby abdominal walls, and the excessive amount of watery discharge from the drainage-tubes made her a very difficult patient to care for, nevertheless she made an uninterrupted and complete recovery, steadily improving and gaining in strength and weight from the time she came out from under the anesthetic. Six weeks after the operation, when she had gained probably twenty or twenty-five pounds in weight, she weighed 154 pounds, just 111 pounds less than before the operation, so I think I am sufficiently conservative when I estimate the weight of the tumor at 125 pounds, the largest so far as I know that has ever been successfully removed in this State. At the end of this time the patient made the journey to her home, 250 miles away, with no inconvenience, and a few weeks ago she wrote me that she was well and happy now that she was rid of her octopus.

CASE II.—Mrs. D., married, no children, no abortions. When four years of age she began to have posterior curvature of the spine, which steadily increased until she arrived at her present condition. The trouble is thought to have been caused by the arms having been forcibly carried back over her head. She began to menstruate at the age of nineteen, has been irregular, the periods lasting three days, the flow slight in amount, and free from pain. The last period was July 31, 1897, before which time she claims she could not have become pregnant. She had intercourse the first week of August, and subsequently. Examination of the patient shows her height to be 4 feet 9 inches. There is a very marked posterior curvature of the spine, extending down to the lumbar vertebræ, the lowest ribs resting on the crests of the ilia. The abdomen and uterus were enlarged to the size of pregnancy at 7 or 7½ months, and overhung the pubes to the middle of the thighs. The fundus of the uterus rested in its lowest part on the thighs, and the cervix was high up against the diaphragm, forming as complete an anteversion as could possibly exist. The fetal heart, parts, and movements were easily recognized. To replace the uterus in the abdomen and make the uterine and pelvic axes correspond was impossible on account of the short distance and small space between the ensiform cartilage, the ribs, and the pelvis. The patient complained of great disturbance of the heart and of pressure on the thorax. She was greatly exhausted after exertion, was pale, and sickly looking, and ate very little. Her pulse-rate varied from 100 to 130, and was always weak; her urine contained albumin, but no casts. Pelvimetry showed the pelvis to have the following measurements: Between anterior superior spines, scant 9 inches; between crests at widest point, 9¾ inches; between trochanters, 10¾ inches; external conjugate, 6¼ inches. The true internal conjugate, as measured by the finger was calculated to be 3¼ inches. The cervix was high up, resting against the diaphragm beyond reach of the examining finger.

From the above description it will be seen that spontaneous delivery could not possibly occur. Production of premature labor was scarcely to be considered on account of the unfavorable position of the cervix and uterine axis, which would render the use of forceps, version, or embryotomy very questionable, and in the opinion of those who saw the patient, more formidable and dangerous than Cæsarian section. I consequently elected the latter, and decided that the Porro-Mueller modification was the procedure best adapted to the case. One week before the calculated time for labor was selected as the most favorable time for both mother and child, thereby avoiding the complications the onset of labor would be likely to bring.

FIG. 2.

Pregnancy in a patient with marked curvature of the spine. Cæsarian section.

The patient was prepared for operation on April 29th, in the usual manner for abdominal section. The abdomen was opened, the uterus turned out, a rubber cord thrown around the cervix, and the abdomen closed off by sterilized gauze and towels. The elastic ligature was then tightened, the uterus incised, and the child extracted, the incision passing through part of the placenta, which was located on the anterior surface of the uterus. The child was delivered 4½ minutes after the operation

was begun and not more than 30 seconds after the elastic ligature was tightened, and given in care of Dr. Arneill, who found it somewhat difficult to resuscitate it, possibly on account of the anesthetic. It came out all right, however, and is now well and hearty. The wire serre-noeud was substituted for the elastic ligature, the uterus amputated through the cervix, the stump fixed in the abdominal wound, and the wound closed. The operation, in which I was very ably assisted by Dr. Lahuis, was completed in 10½ minutes. The patient had a slight reaction temperature, reaching 100.8° F. as the highest point. It had varied from normal to 99.8° F., however, before the operation. Forty-eight hours after the operation her temperature and pulse were the same as before. It is now seven days since the operation, and the patient is making a rapid recovery.

In my opinion, this case emphasizes the value as well as the necessity of seeing such patients early, of carefully weighing the value of each and every procedure open to the surgeon, and of electing the one best adapted to the patient, as well as the time most favorable for its performance. The probabilities are that early in pregnancy while abortion might have been given consideration there was not sufficient reason to believe that the extreme anteversion present during the last months would occur, and one would have been justified in the conclusion that a viable child could be delivered, even though it might have to be born prematurely on account of the small and deformed pelvis. The condition, existing however at 7½ months, at which time I first saw the patient, was such as to make the abdominal operation the most favorable procedure. Had the woman gone to full term and labor begun, the operation being then one of emergency, possibly under very unfavorable conditions and surroundings, the chances for good results to either mother or child would have been very much diminished.

NOTE.—Four months have now elapsed since the operations, and both patients are well and hearty.

MEDICAL PROGRESS.

Actinomycosis of the Face and Neck.—FANTINO (*Rev. Gen. de Path. Interne.*, June 20, 1898) finds that actinomycosis of the face and neck is the form most frequently observed at Turin. Caries of the teeth invariably precedes the development of this parasite although no lesions can be found in the mucous membrane of the mouth. The bucco-pharyngeal origin of the disease is beyond doubt, but it is further proved by the preliminary infiltration which is invariably a submucous one. The masseter muscles are generally contracted. Pain is usually slight and fever not well marked. The mycotic grains are a pathognomonic symptom, but they are rarely found even after repeated examinations. The lesions are more characteristic before the skin is broken and pyogenic cocci introduced. Failure to make a diagnosis in an early stage of the disease may result in the death of the patient since when the mediastinum becomes involved treatment is of little avail. Actinomycosis of the abdomen is usually located in the cecum. There may be ascites but not invariably so, and in consequence the presence or absence of this sign is worth nothing in making a differential diagnosis between actinomycosis and tuberculosis. In the thorax actinomycosis produces no especial signs. It may indeed remain unobserved until the muscles and skin are involved. The woody induration which has been spoken of is not constant and may be lacking in acute cases. It is rather due to secondary infections with streptococci, bacteria coli, etc., than to the primary one. The pus may be thick or serous and therefore presents no characteristic aspect. The sole criterion therefore is the presence of the parasite, and this, as has been said, is found with difficulty. Healing may take place spontaneously but the real treatment is with potassium iodid. Surgical measures are not usually necessary and in many instances total extirpation would be impossible.

Simple Dermatitis of Childhood.—TAKVORIAN (*Gaz. Hebd. de Med. et de Chir.*, September 4, 1898) believes that the cutaneous lesions of young infants which are variously described as intertrigo or erythema, vesicular, papular, etc., are different forms of a simple inflammation of the skin. He therefore proposes to sink these irrelevant distinctions and to class them all under the above heading as simple dermatitis of childhood. Such lesions are common enough in a light form, but grave cases are not lacking, and errors in diagnosis may lead to treatment which will aggravate the trouble.

Artificial Dilatation of the Os Uteri During Labor.—DEMELIN (*L'Obstetrique*, July 15, 1898) advocates the artificial dilatation of the os uteri during labor when there exists a necessity to hasten the birth of the child. This can be accomplished most readily and satisfactorily by the bimanual method. At any time after the uterine contractions have obliterated the cervix, dilatation needs only to be exerted upon the external os. During pregnancy, and in the absence of labor pains this is a much more difficult procedure but may still be accomplished with patience. Under these circumstances the internal os is the portion to which attention must be given. To dilate this requires a great deal of force except in patients who are moribund, or in those in whom the placenta is situated in the vicinity of the cervix. Other methods to produce rapid delivery give results less satisfactory for the child than does bimanual dilatation. The mother does not need to be considered for cervical lesions, if they are produced at all, are slight. A cardinal principle is never to attempt the extraction of a child by forceps or after version before dilatation either natural or artificial is complete. The physician ought always to assure himself of this fact before applying forceps or performing version, and if dilatation is not complete he should complete it in the manner indicated.

Digital Exploration of the Prostate.—VERHOOGEN (*La Policlinique*, June 1, 1898) says that digital examination of the prostate gland is neglected. Although only its posterior surface is palpable a careful examination will reveal much of importance. The finger should be well

smeared with vaselin, or better still, with some soapy non-irritating substance. This facilitates examination, protects the finger from fecal matter and is easily washed away; or, if preferred, a thin rubber finger-cot may be used. In the normal state the lower border of the gland is about 4 cm. (1.6 in.) above the anus, while its superior border is twice that distance from the anus. Hypertrophy of the gland is not easily made out by digital examination. It is more readily determined by means of a catheter. If a catheter is slowly introduced into the bladder and as soon as urine flows through it, it is slowly withdrawn, the distance from the point at which water begins to flow to the point at which the flow ceases is a measure of the length of the prostate. By attaching an irrigator to the catheter and slowly introducing the latter these results can be confirmed. Until the eye of the catheter reaches the prostate water from the irrigator will flow out at the meatus. While the eye is in the prostate no water can flow through the catheter, but as soon as it passes beyond the limit of the prostate water will flow into the bladder, whence it may be drawn off through the catheter. The average length of the prostate measured in this way is about 2 cm. (1 in.), the variations being from 1.75—3.5 cm. In old men with hypertrophy of the organ the measurements are often from 7 to 10 cm. (3 to 4 in.). Digital examination of the prostate is especially valuable in tuberculosis and chronic or acute blennorrhagia. In doubtful cases of tuberculosis one often finds by rectal touch nodules of the disease situated in the prostate gland. These at a later period break down and form abscesses, or terminate with cicatricial tissue and resulting in atrophy of the prostate. In the former case the finger introduced into the rectum will find a large, tender prostate in which there are softened areas or fistulæ. In the second case the gland is small, shriveled, and irregularly nodular. The seminal vesicles usually present similar lesions. In chronic prostatitis as in tuberculosis, the prostate is enlarged and sometimes nodular, but in the former the nodules are larger than in the latter, and the gland also feels edematous on pressure. Digital examination is no less important in acute blenorrhagia, for while the symptoms of inflammation in the urethra and bladder are well described by the patient the diagnosis of acute prostatitis is best made with the finger in the rectum. The prostate will be found tender while the sphincter is so firmly contracted that an anesthetic may be necessary. Sometimes an abscess forms which should be incised rectally if it does not break spontaneously in a short time. Otherwise a great quantity of pus may form before its presence is manifested externally. Malignant tumors of the prostate are hard and nodular and are easily made out rectally. In these cases bimanual examination should be employed to determine the size of the tumor and, what it is more important, its mobility.

The Role of the Spleen in Infection.—GOURMONT and DUFFAU (*Revue Gen. de Pathol. Int.*, June 20, 1898) regard the rôle of the spleen in the resistance of infection as still obscure. Different experimenters have reached apparently contradictory conclusions. Splenectomy acts differently according to the nature of the infection, for the reason that the spleen has not a uniform rôle in the presence of all microbial attacks. Against some it is a useful defense, against others it is powerless. The length of time that elapses between the splenectomy and the infection is also of importance in determining the result. Thus a rabbit whose spleen has recently been removed is more sensitive to pyogenic staphylococci than one who for a longer time has been deprived of this organ; but the more recently splenectomized animal can better resist streptococci than his fellow who has been longer without a spleen. The explanation of these diverse results is said to be as follows: The serum of a rabbit, eight days after the loss of its spleen, is found to be microbiophil for the pyogenic staphylococci, while on the other hand it is neutral or possibly bactericidal toward the streptococci of Marmorek. In brief the spleen secretes such substances as it is able for the defense of the body. They are useful or useless according to the character of the attacking germs.

THERAPEUTIC NOTES.

The Cure of Tetanus.—DU HAMEL (*Med. Moderne*, August 10, 1898) narrates a case of tetanus occurring in a boy aged fifteen and produced by a pistol-shot wound between the thumb and index-finger. Owing to the boy's cries the wound was not properly cleaned and some time later symptoms of tetanus set in. He was taken to the Pasteur Institute and in addition to hypodermic injections of antitetanic serum three cubic centimeters of a similar fluid was injected in each side of the brain near the fissure of Rolando. At the time the injections were made the patient was in a condition of strong opisthotonos. The contractions gradually diminished though they did not entirely disappear for some days. In three weeks he was out of the house. A more striking instance of the therapeutic value of this serum could scarcely be asked for. As a preventive 10 to 20 cubic centimeters should be injected at the time the wound is received. If symptoms of tetanus set in injections should at once be commenced and repeated at intervals until a cure is effected.

Treatment for Fracture of the Olecranon.—SALLE (*Gaz. Heb. de Med. et de Chir.*, June 5, 1898) speaks of the advantages of massage in the treatment of fractures of the olecranon. The repeated examinations which it necessitates familiarize the operators with the minute details of the fracture and with its symptoms. It lessens pain and muscular contraction and so makes diagnosis more accurate. As the treatment of a contusion and a fracture of the olecranon is one and the same the difference of diagnosis between these two is unimportant. Massage renders the prognosis more favorable and the complications which often follow continuous immobilization are avoided.

The duration of treatment by massage does not exceed that of other procedures; osseous suture for example. The results are most satisfactory.

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SATURDAY, OCTOBER 22, 1898.

THE SURGEON-GENERAL OF THE ARMY AND THE NATIONAL RED CROSS SOCIETY.

ANOTHER clash between the Surgeon-General of the Army and the Red-Cross Society seems to be imminent. The latter organization has asked the privilege of establishing Red-Cross hospitals at various points in Porto Rico in connection with the United States garrisons. To this General Sternberg has replied that such an arrangement is entirely unnecessary, as the medical department of the army is amply equipped for all work of that nature.

It will be remembered that when the army was being organized for the invasion of Cuba and the expedition was about to start, the Red Cross made an application to send its nurses and hospital supplies as an adjunct to the army nurses and hospitals. To this request General Sternberg made a similar reply to the one he has given them in the present instance. The result was that the Surgeon-General had the humiliating experience of seeing the army surgeons in the field turning perforce to the Red-Cross hospital, to the Red-Cross supplies, and to the Red-Cross nurses to succor them in their dire distress as the only means of securing proper care for a large number of the sick and wounded soldiers. In what Department the responsibility for this inexcusable and unwarranted necessity rests has not yet been determined, but owing to some lack of foresight, or neglect, or incompetency, General Sternberg's answer to the Red-Cross proposition was not justified by the results. And yet, theoretically, General Sternberg's attitude at that time was correct, and theoretically the position he has again taken is correct. It is the duty of the medical department of the army to see to it that the army is equipped with a proper force of surgeons, assistant surgeons, and ambulance corps. It is the duty of the medical department to provide ample supplies of hospital and surgical necessaries for all emergencies. It is its duty to see that the health of the soldier is protected at every possible point. That is what the medical department is organized for and why it has its existence. The head of that department would, therefore, be wanting in self-respect if by act or word he admitted for one moment that the department was not competent to take care of the army.

It must be admitted that the department lines in the army are very sharply drawn, and in the execution of military orders there is a routine and a complicated machinery by which the orders pass the line from one department to another, which causes seemingly unaccountable delay and has brought the system into disrepute and stigmatized it as "red tape." A man of administrative force and ability, however, who appreciates the fact that the essence of a promulgated order lies in its execution, in times of emergency will break through the barriers of red tape and follow up his written order with a force and determination that will witness its execution before he relinquishes his pursuit. It was apparent on more occasions than one in the recent conflict that the man who metaphorically took the quartermaster or the commissary officer by the throat and insisted that his order should be executed whether any other order was or not, had his way. To have taken every quartermaster or commissary by the throat would have required a surgeon-general possessed of a 1000 hands. A small staff of able administrative officers would have met all emergencies, and obviated the sad shortcomings which robbed the medical department of the glory which it should have achieved. *Verbum sap.*

If the Red Cross is to be denied the opportunity of supplying gaps and shortcomings and shortness of supplies in nurses, hospital necessities, and hospitals themselves, it behooves the medical department to make surer of its ground than it did before Santiago.

VIRCHOW'S HUXLEY LECTURE.

THE second Huxley lecture delivered before the Charing Cross Medical School, London, under the chairmanship of Lord Lister, by the world-renowned savant Rudolph Virchow may be regarded as the most important retrospective contribution to medicine of the year. From the high vantage ground of a half-century's experience and the lofty pinnacle on which he has been placed by his many *bahnbrechende* contributions to science he has scanned with philosophic eyes the past and with wizard glasses searched the future in a most illuminating way.

Having passed in brief review the factors that brought about deliverance from the pernicious humoral pathology the lecturer went on to show that the greatest difficulty in the advance of biology has been the tendency of its disciples to set in the forefront of their inquiries the search after the unity of life. Hence arose the doctrine of vital energy and of spontaneous generation. Every one knows that it was Virchow's own investigations that emancipated science from this bondage. We envy his auditors the opportunity of hearing from his own lips a recitation of the processes and stages by which he was led to the conviction and proof that every living organism is not an individual but a social mechanism, and, like every organ and tissue, contains cells which are composed of organic chemical substances but which are not themselves alive. Application of this cellular theory permits us to lift veil after veil from the mysteries which have shrouded the doctrine of heredity even though it does not solve completely all the problems of that science. In reference to heredity the lecturer embraced the opportunity to state positively his belief in the hereditary transmission of acquired conditions.

With regard to the subject of parasitism he referred to the fact that the progress of scientific observation was retarded for centuries by the prevalence of the assumption that disease in general was regarded as a parasite. The recognition that the presence of a parasite meant harm to its host indicated the dawn of the true interpretation of this most important class of diseases. Study of the parasites led to the detection of parasitic protozoa by which the occurrence of the tropical fevers may be explained, and eventually their prevention successfully encompassed. It is necessary to distinguish between the cause and the essential nature of infectious disease, the latter of which is determined by the reaction of the tissues and organs to the microbes. Moreover that there is a relation between the smaller parasites and the diseases determined by them. Investigation of the mode of action of infection has already led to Listerism and to the introduction of serum-therapeutics, but apparently we are only on the threshold of the arena thus opened.

In closing Virchow referred to the problem of immunity and artificial immunization, the solution of which the whole world is awaiting with anxious impatience. Unfortunately the question has not yet emerged from the conflict of opinion and still less is the secret of immunity itself revealed. Even if everything points to the view that immunity is based on the condition of the cells and the juices of their parenchyma, we must still become accustomed to the thought that only the next century can bring perfect light and certainty on this point. Before then we must at least have succeeded in finding a way of strengthening the cells in their fight with bacteria by means of immunity. Those who have looked askance on the therapectic use of tissue-juices and the derivatives of secretions such as the semen may hearken to these words: "Though we are not yet in a position to pass final judgment, every one who is sufficiently unprejudiced must admit that they have in many cases been good. The source of all these substances is the cell-activity of living tissue, and that which is secreted thereby. Its therapeutic or pathologic action on individual organs or tissues can only exercise a regulatory influence on cell activity."

ECHOES AND NEWS.

Meeting of the Southern Surgical and Gynecological Society Postponed.—The Southern Surgical and Gynecological Association has postponed its meeting at Memphis, Tennessee, until December 13, 14, and 15, 1898, an account of the prevalence of yellow fever.

The Use of Tuberculin in France.—The general council of the Côte-d'Or has passed a resolution calling upon the

public authorities to pass a law rendering it compulsory for all animals intended for purposes of food or for milk supplies to be treated previously with tuberculin, and urging the observance of all sanitary measures directed to the stamping out of bovine tuberculosis.

The Physician Not Responsible for Notification of Birth.—A French legal tribunal has lately given judgment to the effect that the medical attendant in cases of childbirth is not obliged to notify the authorities of the birth, provided the father is present. A midwife was recently prosecuted for omitting to supply a birth-certificate, but she was acquitted on the ground that the father was present at the time.

The Death of Dr. Toscani.—Dr. Davide Toscani, professor of legal medicine in the University of Rome, died after a long illness at Rome, September 15, 1898. About twenty-five years ago he established the Municipal Office of Hygiene at Rome, and was its director for twenty years. The great improvement which has taken place in the sanitary condition of that city during this time is largely due to his labors.

The New York Obstetrical Society.—At the annual meeting of the New York Obstetrical Society, October 11, 1898, the following officers were elected for the ensuing year: President, Dr. W. R. Pryor; vice-presidents, Dr. Le Roy Broun and Dr. Edwin B. Cragin; recording secretary, Dr. Joseph Brettauer; assistant recording secretary, Dr. E. E. Tull; corresponding secretary, Dr. George W. Jarman; treasurer, Dr. J. Lee Morrill; pathologist, Dr. George C. Freeborn.

Dr. McGee Still in Service.—Assistant Surgeon Annita N. McGee, U. S. A., has been ordered to proceed from Washington, D. C., to Fort Monroe on official business pertaining to the medical department of the army, and on the completion of her duty to return to her proper station. Dr. McGee has had charge of the selection and appointment of female nurses employed by the army. She is the daughter of Professor Simon Newcomb, U. S. N., and the wife of Professor McGee of the Geological Survey, and has the distinction of being the only woman to hold a commission in the U. S. Army.

Health of the Troops at Santiago.—The number of cases of sickness from all causes has slightly increased during the past week, while the number of cases of fever remains about the same with the general tendency to decrease. The daily average of those on the sick-list has been over one thousand. Eleven deaths from all causes are reported. Of these deaths two each were due to typhoid, malarial remittent, and yellow fevers, one each to chronic dysentery, typhoid pneumonia, bilious fever, and delirium tremens, and one to malarial remittent fever accompanied by acute dysentery.

Obituary.—Dr. Nathan Smith Lincoln, one of the oldest and most prominent physicians of Washington, D. C., died at his residence October 14th, at the age of seventy. Dr. Lincoln was the grandson of Dr. Nathan Smith, who was the founder of the medical schools of Yale and Dartmouth. Dr. Lincoln was graduated from Dartmouth College in 1850, and from the Medical Department of the University of Maryland two years later, removing to Washington in 1854. During the Civil War he was surgeon-in-chief in the military hospital at Washington. Since then he has held various high offices in the District and National medical societies, and was one of the vice-presidents of the Ninth International Medical Congress.

A Case of Tetanus Cured by Antitoxin.—A young man of Passaic, N. J., recently fell from a hotel window and crashed through a skylight. Besides many minor injuries sustained, a large portion of the calf of one leg was torn completely away. Conservative work was done and the wound gave every promise of healing kindly when suddenly tetanus developed. Antitoxin serum was injected hypodermatically but without effect. As a final effort it was decided to resort to the heroic measure of trephining the skull and injecting the antitoxin directly into the brain tissue. This was accordingly done, with the result that almost immediately there was a relaxation of the muscles of the jaw. Since then improvement has been steady and constant.

The Handwriting of Medical Men.—A writer in a recent number of *Medicin Moderne*, after expressing his sympathy with the pharmacists whose difficult task it is to decipher illegible prescriptions, adds that the matter has attracted the attention of the Dean of the Medical Faculty of Paris. The execrable handwriting of many French physicians is thought to be a menace to the public, and the Dean is reported to have said that he would take the earliest opportunity of bringing the matter to the notice of the faculty. The pharmacists of America will doubtless sympathize with this movement. Typewritten "copy" is saving the dispositions and morals of medical editors, but relief for the pharmacist would seem to be a much more difficult matter.

Poisoned from Eating Shrimps.—Forty cases of acute poisoning from eating shrimps occurred at St. Anne's-on-Sea, near Blackpool, England, during the third week in September. The symptoms were those of an irritant poison—diarrhea, vomiting, and severe pain, especially in the bowels, being marked. Happily no fatal cases occurred, thanks to prompt medical assistance. The shrimps were potted and had been cleaned and cooked in the usual manner, and converted into paste by the aid of butter. There is no record of an analysis of the shrimp paste having been made. It would seem probable that, as the paste was fairly fresh its ill effects were due to an organic poison, ptomain, or decomposition product consequent upon the excessive heat.

Story Regarding Dr. Shippen of Philadelphia.—A writer in *Lippincott's Magazine* tells a new anecdote of Dr. Shippen of Revolutionary fame. He left his house early one morning and was hurrying down the street, when he noticed a singular and ferocious looking man, whose gaze was fastened upon him. With instinctive politeness Dr.

Shippen smiled, raised his hat and passed on. Then, a shot was heard. Turning quickly Dr. Shippen found that the stranger had just left his home with the insane intention of killing the first man he met. Dr. Shippen was the first man; but his absolute fearlessness and constitutional, as well as cultivated courtesy, had put the man off his guard, and the next passer-by had caught the bullet intended for him. That smile and bow had saved his life.

Smallpox in New York State.—Twenty-one cases of smallpox have appeared within the last two months at McLean, a village twelve miles from Ithaca. The contagion was carried there by a traveling show, one member of which was taken ill and confined in the isolated hospital at Ithaca. The cases have been of such a mild character as to excite little suspicion. The disease was diagnosed and treated as an ordinary skin eruption. It was only recently that its real nature was suspected, and an investigation ordered by the State Board of Health. An inspector was sent to the village who examined the cases conjointly with the members of the Ithaca Board of Health and pronounced them to be genuine smallpox. All suspected cases were at once quarantined, but as the entire village has been exposed to the contagion for a month many more cases are expected to develop.

An Ethical Specialist.—A veteran specialist of a neighboring city desires to make it clear that he stands ready to observe the golden rule—of doing to others as he would be done by—toward his fellow practitioners. He has sent his card to the doctors of his community with the following foot-note: "In strict accordance with professional ethics, patients referred to me for diagnosis, or suggestions regarding remedial measures, will not then, nor thereafter, receive treatment at my hands unless by professional request or consent." Why this gentleman, who has for years had the reputation of being jealous of the rights of others, should feel called upon to make this declaration of ethical pronouncement, we know not. One inference we may be pardoned for making is that some of his neighbors are "a little off" in their consultation ethics.

Alleged Antagonism of Malarial Fevers and Asiatic Plague.—A letter to the London *Lancet*, August 20th, from Bombay, points out that there is an increase of plague in several inland towns and a relative freedom from that disease at Calcutta. The writer says that he believes there will be found to exist an active antagonism on the part of malarial infection against the plague. "It is very suggestive," he says, "that inoculation for plague should exert a favorable influence on the subject of malarial disease. Many persons who have periodically suffered from febrile attacks of malarial character have remained free from them after inoculation. The antagonism of one toxin to another, or to the development of certain forms of bacilli or other micro-organisms, is little known, but it is probably on these lines that some of the greatest achievements in experimental science have yet to be made known."

The Extortions of Foreign Manufacturers.—In commenting recently upon this subject the *Bulletin of Pharmacy* says: "The following prices tell the story of the unmitigated extortion to which the general public, the drug trade, and the medical profession of America have been subjected for nearly two decades. The first column gives the prices per ounce charged the retail druggist in Canada; in the second appear the prices paid by the American druggist and dispenser:

Drug.	Canada.	U. S.
Phenacetin	0.25	1.00
Sulfonal	0.25	1.35
Trional	0.90	1.50

"This list of three drugs, be it remembered, represents only an insignificant and paltry fraction of the patented synthetic chemicals which have been poured in upon the American market chiefly by German manufacturers. A complete list would cover easily two or three of our pages, and in nearly every case the same glaring disparity prevails between the moderate prices ruling in Germany, France, England, and Canada, and the outrageously extortionate prices imposed upon the same articles in the United States. We earnestly urge our readers to do something more than merely curse the monopolists. Write the congressmen and senators. Write the commissioners, and lend a helping hand to the relief of the public from extortion and spoliation."

Little Malaria in the Porto-Rican Army.—Dr. Richard C. Cabot, who had charge of the hospital relief ship "Bay State" during her recent trip to Porto Rico to succor the Massachusetts troops and bring back the sick and convalescent, says in a letter to the *Boston Medical and Surgical Journal* that he examined the blood twice in 277 cases collected from all parts of the island, once for malaria and once for the Widal typhoid reaction. Continuing, he says: "To me the results of these examinations were very surprising. Just before leaving Boston I had been examining at the Massachusetts General Hospital the cases brought from Santiago by the "Olivette" and the "Bay State." A large proportion of these cases showed in their blood the organisms of estivo-autumnal malaria, and I had become so used to seeing the crescentic parasites in case after case that I listened with polite skepticism to the report of the doctor at Guanico, who said to me that he had seen no malaria in his regiment. When my examination for malaria began to turn out negative in case after case, I could hardly believe my eyes, and repeated the examinations as carefully as I knew how. The result was the same, and out of the whole 277 cases examined I found malarial parasites in only two cases—one the tertian, and one the estivo-autumnal organism. Since the crescentic forms of malarial parasites remain in the blood for weeks despite the administration of quinin, I do not think that these negative findings were due to the fact that almost all the patients (typhoids included) had been taking quinin in large doses. We were highly gratified to hear before leaving Ponce, that owing to my findings and those of Dr. T. Leary, the

wholesale use of quinin in all fevers at the Ponce United States Hospital was stopped. This alone would, I think, have made the "Bay State's" trip worth while."

CORRESPONDENCE.

THE ROLE OF THE PUBLIC CARRIAGE IN DISEASE CONTAGION.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—The other day I was an eye-witness to the transportation of a consumptive from one residence to another in an ordinary hack. It suggested to my mind what part this every-day vehicle plays in disease contagion. At most funerals the hack is brought into use. Relatives who have been exposed to the germs of such diseases as diphtheria, scarlet fever, or perhaps tuberculosis, occupy these carriages. The next day, or even on the same day of such a funeral, these very hacks are used by a different set of individuals.

I ask, then, what can prevent people exposed to infection from carrying pathogenic germs to and depositing them in the upholstered parts of the carriage? Often these very vehicles are brought into play as primitive ambulances whereby patients are carried from the station, from the gutter, or from the hotel to private residences or even hospitals. At the emergency the nature of the trouble is not always known. And here, again, many a patient suffering from the prodromes of some contagious disease is dumped into a hack and hurried off to his home or where not. The individual who occupies that hack next is liable to infection.

Yours truly,

A. HOLLINGWORTH, M.D.

PAWTUCKET, R. I., October 10, 1898.

WOUNDS OF THE HEART.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—Your editorial of October 8, 1898, on the subject of "Wounds of the Heart" interested me very much. In my opinion no domain in surgery, at present unmarked, promises so much in brilliancy of result to the skilful and daring operator.

Some years ago I made a series of experiments in heart wounds, using cats as the subjects. The results apparently showed that a fatal issue may result in one of two ways. Certain wounds, especially those near the apex, were immediately and instantly fatal, the animal dying as suddenly as if stricken by lightning. Though I never succeeded in determining the cause to an absolute demonstration, my inference was and is that the involvement of the intracardiac ganglia was the reason of the sudden fatal issue. These cases, of course, are at present without a vestige of hope, as the subjects are dead, practically, from the time of the reception of the injury. There is, however, a second class which promises brilliant results. I found that when the auricle or ventricle was penetrated, there being but a small wound in the pericardial sac, the blood was poured out until the sac was filled. The incessant action of the heart prevented the formation of an occluding blood-clot. The pericardial sac being filled with blood, the heart was simply swamped in blood and its actions hindered by it. Time and again I have seen a heart which had practically ceased to beat, resume beating with wonted force and rhythm when the pericardium was incised and the blood turned out. In this class of cases there are two direct causes of a fatal issue: (1) Interference with heart movements by blood in the pericardial sac, and (2) fatal hemorrhage.

The indication is plain. Resect the fifth or sixth rib, or both, incise the pericardium, turn out what clot may be present, and close the wound in the heart structure. Most patients will die before they come to the hand of a competent surgeon, but in a certain number, such as the one detailed in the editorial mentioned, there will be a large enough opening in the pericardium to allow the escape of part of the blood, thus obviating fatal interference with the action of the heart.

Thanking you for your indulgence, and hoping that some American surgeon may apply these principles to actual practice, I am

Yours very truly,

V. M. REICHARD, M.D.

FAIR PLAY, MD., October 15, 1898.

SOME GUIDES TO THE DIAGNOSIS AND DIFFERENTIATION OF APPENDICITIS.

To the Editor of the MEDICAL NEWS:

DEAR SIR:—Since it is a recognized fact that the diagnosis of appendicitis is often very obscure in the early stages the following sign which has so often served me well, may prove of value to other surgeons. Realizing how well Hilton's law in regard to the nerve-supply of joints (a nerve which supplies a joint supplies also the muscles controlling the joint and the skin covering it) applies to the abdomen, it has occurred to me to put it to practical use in localizing as far as possible the side and situation of an inflammatory process in the abdomen.

The books tell us to look for a contracted rectus muscle on the one side, but how difficult it often is to make out that one is contracted or slightly so and the other relaxed. The sign I would point out is this: Test the epigastric or rectus reflex on each side and it will be found that the right rectus being already contracted or partially so will not respond while the left will. The reason is that the inflamed appendix already has called upon this reflex to protect it.

Among several cases in which I have used this sign with great success, I will briefly recount a recent one: A girl, aged eleven years, was attacked with severe diarrhea after eating peanuts. On the second day she screamed with pain on and after passing urine, and her abdomen in the pelvic region was tender to the touch. On each side corresponding to about 1½ inches below McBurney's point she winced upon pressure but on neither was the pain more acute than on the other. The abdomen seemed perfectly pliable and pain was complained of in no other region. Temperature varied from 99° to 101° F. for

three days following the diarrhea, pulse from 80 to 100. A catarrhal condition of the bowels was present as was evinced by the many dejections of dirty-green and thin stools. On one occasion during the first 24 hours a slight vomit occurred. No satisfactory symptom of appendicitis could be found. I pointed out to my colleagues, Drs. Hart and Martin, the sign as described above. We immediately applied it to the case in hand and found it of the greatest value; the diagnosis was promptly made, and I operated and removed successfully a gangrenous appendix. The patient is now perfectly well.

I was called recently in consultation with Dr. C. F. Gardener to see a patient who had had several attacks presumably of appendicitis, and, being tired of their repetition, wished an operation. He was apparently just recovering from an attack, and his physician informed me that at the onset he had usually given immediately a large dose of salts which cut short the attack. On examining the patient I found a tender spot below the McBurney point, but nothing abnormal could be detected. I discovered, however, that I could pass my finger with the greatest ease up the inguinal canal, and at the internal ring which was easily felt the tender point was immediately encountered, and the patient said at once: "That is the place." This corresponded exactly with the spot he had indicated externally. On the left side a condition somewhat similar was detected but the parts were less relaxed. The explanation at once suggested itself that on several occasions he had suffered from a beginning hernia, but the peristaltic action caused by the salts had withdrawn the bowel from the inguinal pouch. No operation was advised.

GERALD BERTRAM WEBB, M.D.

COLORADO SPRINGS, COL., OCTOBER 14, 1898.

A QUACK IN TROUBLE.

To the Editor of the MEDICAL NEWS.

DEAR SIR: W. G. Brown, attorney for Mr. Edward S. Hedges, Secretary of the American Horse Exchange, has begun an action against E. H. Bemis of Glens Falls, N. Y., to recover $25,000 damages for the loss of his client's eyesight, through unskilful, unscientific, and grossly negligent treatment. Bemis is a layman, who has made himself rich by advertising that he can cure all diseases of the eye, from hordeolum to glaucoma. His victims have been many, and are drawn from all grades of society. For nearly a year Mr. Hedges had been gradually losing his sight, due to atrophy of the optic nerve. He was under the care of an eminent oculist in New York City, who, curiously enough, would not promise a complete restoration of sight. The wonderful Bemis, however, would promise anything, and to Mr. Hedges these alluring promises loomed up like a life-preserver to a drowning man. A few days after his arrival at the sanatorium a colored waiter from the "Sagamore" on Lake George came down to be treated for what was probably a gonorrheal ophthalmia. Bemis, not being a medical man, is probably ignorant of the virulence of the industrious gonococcus when turned loose in a suitable medium. Anyway, he took no antiseptic precautions, but used the same pipette and solutions in the eyes of all the patients, with the result that five days after the advent of the negro there were nine fresh cases of "conjunctivitis." Bemis was profuse with assurances that they had simply taken cold and would be all right in a few days; but when Mr. Hedges consulted a regular physician and learned that he had acquired a dangerous and contagious disease, he told his fellow sufferers, and there was a general stampede for New York. This prompt action undoubtedly prevented the total destruction of many eyes, but there followed weeks of anguish and anxiety, together with pecuniary loss by reason of incapacity for business, a loss which Mr. Hedges estimates in his case at $25,000.

Yours truly,

JOSEPH ALAN O'NEILL, M.D.

NEW YORK, October 10, 1898.

OUR PHILADELPHIA LETTER.

[From Our Special Correspondent.]

HOSPITAL ABUSE—DAMAGES AGAINST A PHYSICIAN—FATAL CASE OF TETANUS TREATED WITH ANTITOXIN—SICK-SOLDIERS' FUND BENEFIT—NOTES ON CHARITIES AND CORRECTION COMMITTEE—AN ARREST FOR PRACTISING WITHOUT A LICENSE—PERSONAL NOTES—HEALTH-BOARD STATISTICS.

PHILADELPHIA, October 19, 1898.

THE *Philadelphia Medical Journal*, in an editorial, entitled "Another Phase of Hospital Abuse," describes the unfortunate experience of a physician who endeavored to have a patient suffering from purulent conjunctivitis admitted to a hospital. After being refused admission at several which receive State aid, the patient was finally taken care of by a denominational institution, which, because it is denominational, does not receive support from the State.

In regard to hospital abuse, the agitation which was started last spring seems to have been utterly devoid of results, probably because the question was not discussed on its broad issues but in a limited way. There are several causes for this abuse, among them being: First, a desire for large attendance at the clinics in order to secure liberal contributions from the State and individuals on the recorded number of patients treated. Second, a desire for large attendance in order to secure among the number an average of rare cases for presentation to medical societies or students. Third, a desire for the honor (?) of treating the largest number of patients. The fruits of this system are: (1) Necessarily limited attention paid to many worthy cases because of the time required to treat the enormous number of patients at the clinics. (2) Deprivation of many fees to physicians to whom these patients would ordinarily go. (3) The creation of a pauper feeling among the community. (4) Free consultations by unscrupulous physicians, who, nevertheless, charge the patient "for Professor Blank's opinion."

The remedy applicable to the first cause is appropriations based upon the number of patients treated in the wards of hospitals, and not upon the dispensary cases

where expenses are *nil*, most hospitals charging at least the cost of prescriptions. For the existence of the second cause there is no excuse. The *rare* case is unsuited for presentation to students, and to the medical men it will eventually be presented independent of the clinic. What excuse can be offered for the third cause? Human nature seems to be its chief factor. Why does the physician in charge permit himself to be deprived of just consultation fees? Possibly because his directors complain that "the clinic is falling off." Why does the assistant continue to treat these cases which should legitimately be his? Possibly because he prefers to gain some experience rather than wait hopelessly for the very people he is treating at the dispensary. So the endless chain goes on, and until physicians realize their ultimate loss in pursuing this policy it doubtless will continue to go on, and meetings for its suppression will continue to be a farce.

Damages to the extent of $3500 were awarded the plaintiff in an action brought by William H. Forse of Norristown against Dr. H. F. Scholl. The plaintiff had been left a cripple owing to the alleged unskilful treatment by the doctor, whose diagnosis and treatment of the case were afterward criticised by a hospital physician to whom the plaintiff went for relief.

A fatal case of tetanus occurred last week in which antitoxin proved of no avail, though administered early. The patient, a boy fifteen years old, had his finger stamped upon while playing football, and four days later developed symptoms of tetanus. The finger was amputated, and after the administration of antitoxin the boy appeared to improve for forty-eight hours, at the end of which time tetanic convulsions came on, causing death by exhaustion the tenth day following the injury.

The Medico-Chirurgical Hospital is to have a benefit performance next Tuesday afternoon at the Academy of Music in aid of the Sick-Soldier Fund. President McKinley and other prominent visitors to the Peace Jubilee are expected to be present.

Councils Committee on Charities and Correction have decided to increase the salary of its "out-door" physicians from $240 to $480 a year. An item of $28,000 for the support of feeble-minded children in the institute at Elwyn was amended to read "or other institutions," as the Board is having trouble with the institution, and wishes to be able to send the children elsewhere in case friction continues. Dr. J. William White sent in his resignation as a member of the surgical staff of Blockley, and Dr. David Bevan resigned his position as out-door physician for District B.

H. P. Lorman of Philadelphia was taken to Carlisle by a State detective and there lodged in jail, having been indicted by the Grand Jury for practising medicine in Cumberland County without a license.

Dr. Abram Jacobi of New York delivered an address before the College of Physicians, Monday, October 10th, taking for his subject "Some Preventatives." He spoke of the prevention of puerperal fever, gave some advice as to infant-feeding, and discussed at length the prevention of premature senility by careful rules in regard to eating, drinking, exercising, and sleeping, and in this connection decried the "leave-to-Nature" theory of curing disease.

The Board of Directors of City Trusts have made the following appointments at the Wills Eye Hospital: Dr. Albert C. Snell to be resident-surgeon for one year from November 1st; Dr. James Thorington to be assistant-surgeon under Dr. Risley; Dr. Walter L. Pyle to be assistant-surgeon under Dr. Behrens.

Dr. William Pratt Read, a graduate of Princeton and of the Medical Department of the University of Pennsylvania, died October 10th, aged fifty-one years. Dr. Read was Grand Medical Examiner of the Order of United Friends, a Mason, and one of the founders of the American Legion of Honor.

The total number of deaths occurring in Philadelphia, as reported at the Health Office, for the week ending October 15th was 331. The total number of new cases of contagious diseases for the week was 333, as follows: Diphtheria, 115 cases with 21 deaths; scarlet fever, 18 cases with 1 death; typhoid fever, 200 cases with 11 deaths.

OUR FOREIGN LETTER.

The Seventieth Annual Congress of German Naturalists and Physicians.

[Specially Reported for the MEDICAL NEWS.]

THE annual meeting of the German Naturalists and Physicians is always one of the important scientific and medical events of the year in Germany and this year's session, which opened at Düsseldorf on September 19th, proved no exception to the rule. A notable feature in connection with the congress was the exhibition of instruments, books, and objects of interest connected with science and medicine. The exhibition illustrative of the history of medicine was especially instructive, all the ages and countries being well represented. An important collection of instruments that had been used by the medicine men of various American Indian tribes, could not help but attract an American's attention and make him wonder if a sufficient amount of care is being taken to preserve a complete collection of such interesting objects in America, where they will have in a few years the special archeological and ethnological interest of belonging to an extinct people.

At 9 A.M., September 19th, the first general session took place in the Imperial Hall of the municipal "Tonhalle." More than 800 people were present, among whom, in the light of the recent unfavorable position taken by the representatives of the German medical men on Doctor's Day at Wiesbaden as regards medical studies for women, it is interesting to note that there were a large number of women. It is but another indication of the gradual submission to the inevitable in the matter of the higher education of women that is growing more and more noticeable throughout Germany, despite the persistent protests of the more conservative. Last year during the session of this same congress at Brunswick, when the question of excluding women from certain of the more exclusively medical sessions came up, Virchow lent all the great

weight of his authority and influence in favor of the fullest privileges for women at the congress. This year the German women interested in science and medicine were in attendance in full force.

PROFESSOR WALDEYER of Berlin in his opening address as President announced the establishment of a formal society of German Naturalists and Medical Men, under whose auspices future congresses are to be held. So far the organization of the yearly meetings has been in the hands of committees appointed annually. Especially of late years, a number of the regular attendants at the sessions have felt the lack of, and discussed in various journals the need of, closer union. This has now been effected.

PROFESSOR KLEIN of Göttingen spoke on "Polytechnic Schools and Universities." This was one of the non-medical addresses, but was interesting to medical men because Professor Klein demanded for polytechnic schools the facilities for giving instruction as practical as the German medical schools are giving at present. Just as the physician from practical contact with cases is able to take up at once the practice of his profession, so the trained mechanician should be able to enter upon practical work immediately after leaving school. As the medical men in their discussion of clinical instruction in medicine at Wiesbaden in April claimed that it is especially from the practical side that there is room for improvement in the present teaching of medicine, this expression of "the way that others see us," a typical example of the common feeling that other people are so much better off than we are ourselves, was very interesting. That professors of the natural sciences and mathematics should demand more practical work for students (as well as the teachers of medicine) is but a pregnant sign of the times in educational matters generally, for theory is losing its precedence to practice all along the line.

PROFESSOR TILLMANS reviewed "The Century in Surgery" in an address of general rather than special interest. Anesthesia, antisepsis and asepsis, and the Röntgen-rays were particularly dwelt upon. Professor Tillmans considers that the future development of surgery now depends on the cultivation of surgical pathology and intimate collaboration with the other branches of general medicine, in order that by earlier and more assured diagnosis new fields of operation may be opened up to the surgeon. Modern surgical technic he considers so perfect that the limits of its application to human ills have been by no means reached as yet. Animal experimentation he thinks has accomplished so much for mankind in the past, in surgery, in serum-therapy, in the study of the etiology of disease, and in so many other branches of medicine that he considers the prejudice against it as *inhuman*. He foresees that the undue limitation of animal experimentation would be a serious detriment to the medicine and the surgery of the future. As Professor Moritz Schmidt in opening the German Medical Congress some months ago took occasion to allude to the same subject it may be seen that the movement is gradually forcing itself upon the attention of German medical men and serious efforts are being made to educate public opinion in the matter and preclude the possibility of inhibitory legislation that would interfere with scientific investigation.

The close of Professor Tillmans' address took up the subject of military surgery and his sketch of its future would seem to indicate, as one of the German papers puts it, that "the cry of peace from the Neva had found no echo upon the banks of the Düssel." Despite the Czar's invitation to disarm, Professor Tillmans, a General Oberarzt in the German army, discussed confidently the surgery of the wars to come. As at the German Surgical Congress in April the dum-dum bullets, *i. e.*, the nickel-covered bullets, with unsheathed points, that the English have been using in India, were a subject for the severest condemnation on the score of inhumanity. It was suggested that the use of such missiles should be especially interdicted by international law.

Despite the efficiency of modern firearms Professor Tillmans was able to show by a comparison of the losses in battles at the beginning of the century with those of more recent years—the mortality at Leipzig, Borodino, and Waterloo, with that of Gravelotte, Sedan, and Plevna—that the losses have not become more severe. Distance fighting and the tendency to make greater use of the natural protection afforded by the lay of the land are factors that have led to decrease in actual mortality and to the infection of wounds that are not so serious as in the hand-to-hand combats that characterized the beginning of the century. These factors will play a still more important rôle in future wars and so make the position of the military surgeon ever more and more important.

"Water Dams in Mountain Regions," the third of the addresses at the first general session was not medical, but had a distinct interest for medical men because PROFESSOR INTZE of Aix proposed by the construction of huge reservoirs in mountain regions, first, to improve and enlarge the supply of drinking-water for cities and water for agricultural purposes; second, to retain the mountain population at home and prevent the present lamentable tendency to crowd into cities, by furnishing occupation to them in the employment in mills and factories of the water-power that might thus be harnessed; and third, to prevent the all too frequent suffering that is inflicted in various parts of the country by floods in the springtime, or after heavy rains in mountainous regions.

The General medical session was given up to papers on "The Physiology and Pathology of the Circulatory Apparatus."

PROFESSOR FREY of Zurich spoke of "Heart Activity and Its Physiological Relations." He supported the idea now becoming so popular that the heart-muscle acts automatically; that is, has within itself a potentiality to rhythmic contraction independent of nervous or circulatory connections. His comparison of ordinary striped, *i. e.*, skeletal muscle-fiber with heart-muscle was interesting in other regards also. Besides this capability of contraction apart from nervous connection, the heart-muscle fibers differ inasmuch as they virtually do not represent functional unities as do skeletal muscle-fibers. Heart-fibers

are so felted together and their branching network so connected that irritation of a single fiber is communicated to others and leads to the contraction of all. This does not happen with skeletal muscle-fibers, each of which is functionally independent.

Professor Frey sees in certain improvements in the technic of experimentation upon the heart great promises for the advancement of our knowledge of cardiac physiology and of the action of drugs upon the heart. Even the hearts of warm-blooded animals may now be kept beating for hours after removal from the body if proper precautions be taken. Recent experiments have shown that if but small quantities of blood or even serum be introduced at regular intervals into the coronary circulation and the heart kept constantly under a pressure of oxygen equal to about two atmospheres the hearts of warm-blooded animals may be kept alive even as long as twenty-four hours. The importance of this in our present insufficient knowledge of cardiac physiology and therapeutics is evident.

PROFESSOR THOMA of Magdeburg read a paper on "Affections of the Coats of the Blood-vessels as the Causes and Effects of Disturbances of the Circulation." He insisted especially upon the alterations in the walls of the capillaries, which are so early affected and which play so important a rôle in tissue metabolism. The capillaries must permit or influence the transmission of very different substances for nutritional purposes in the various tissues of the body, in the brain, for instance, in abdominal organs, in the bones, in the muscles. Slight alterations are sufficient to affect this delicate mechanism, hence the general nutrition suffers. This forms an important factor in all disturbances of the general metabolism.

"Processes in the Heart and Vascular System under Pathological Conditions" was the title of a paper by PROFESSOR KREHL of Jena, which, owing to the author's absence because of illness was read by PROFESSOR HIS of Jena. Professor Krehl considers that we do not as yet understand why under certain circumstances venesection does good. He has studied the effect of it on the various organs of animals. Its evident object would seem to be a reduction in blood-pressure, but this it accomplishes only for a while. There would seem to be alterative effects produced on general organic function by this passing reduction in blood-pressure that will yet form a groundwork for interesting studies. The other important element in cardiac pathology at present is the effect upon the heart of toxins, not alone those of bacterial origin, but those also due to defective organic metabolism.

In the Second General Session (combined medicine and general science) PROFESSOR MARTINS of Rostock spoke of "The Causes of and Predisposing Conditions for Disease." He considered that Virchow's address published in 1880 on "The Entity and Causes of Disease" is still and will remain one of the classics of medical literature despite the fact that it was published just before the present tidal wave of bacteriology had swept over the sea o modern medicine. The conclusions of Virchow's address remain practically as true to-day as twenty years ago, and though we have learned so much about the bacterial causes of disease, we are scarcely nearer to a satisfactory explanation of its real origin than we were before. What predisposition or tendency of the organism gives the opportunity for the vegetable parasite to gain a foothold we are no nearer knowing than before, yet this is *the* important element in the origin of disease. There was a time in the inception of modern pathological anatomy, when the discovery of the distinctive pathological lesion of the disease was thought to have brought medicine nearer to the *ens morbi*, to the essence of the disease. When it was found, for example, that hepatization of the lungs was characteristic of pneumonia it was considered that a distinct step had been made toward knowing the entity of inflammation of the lungs. Now we know the bacterial cause that sets up the hepatization, but we are no nearer knowing why one man is afflicted with it, another not, though both seem to have been exposed to similar conditions and in the mouths of both the pneumococcus may be demonstrable.

The cause of disease has always interested mankind, but words have displaced ideas only too often in the attempt to state it. Every practitioner knows that it is almost impossible to get clear, definite, satisfactory answers from most patients as to the preliminary symptoms, the course of the disease, and its effect on various functions, but all of them are ready to volunteer information as to its cause. One has taken cold, another has had rheumatism or has seen it in a friend, and has ascribed his symptoms to rheumatic trouble, or it is gout, etc. There is a widespread belief in the mysterious action of certain simple causes that directly attack the organism, the question of predisposition being left out of the question.

There is a feeling in this matter amounting almost to fetichism and which corresponds to that other almost universal feeling, that there are in Nature certain mysterious remedies that repair natural forces in the same simple direct way as the supposed pathogenic agents work harm. Nearly every physician has had the experience of asking educated people, members of the aristocracy even, why they gave recommendations to quacks, only to receive the naïve answer, that they thought in perfect good faith that the wonderful man had discovered secrets of Nature which had escaped the medical profession, and that these mysterious forces over which he alone had control are more powerful than disease.

Each step in modern medicine has brought us farther and farther from this simple naïve causal idea of the origin of disease and this simple specific therapeutics. If exposure to microbic infection was always followed by disease, then bacteriology would have given us an explanation of the origin of disease. Infection and disease are by no means correlative terms and the difficult question of susceptibility comes in as an important element to make us realize that we are still a long way from the explanation of specific pathogenesis. The study of this question of susceptibility and its causes is to be an important occupation for the pathologist of the Twentieth Century, and much more is to be hoped from a widening

of our knowledge of predisposing conditions to disease, than from the further discovery of specific bacterial causes. This advance in knowledge, however, will came from no one-sided bacteriological hygienist, but from those who have studied profoundly the conditions of disease as they are.

PROFESSOR VAN HOFF of Berlin spoke on "The Increasing Significance of Inorganic Chemistry." While for a number of years general attention has been directed to organic chemistry, of late a series of most important discoveries have recalled attention to inorganic chemistry. No less than six new elements have been found within a year or two, argon, helion, metargon, neon, krypton, xion; carborundum, calcium carbid, aluminium, chromium, and the rarer metals are being prepared commercially. The connection with physics, especially with the laws as to heat, are giving the theory of chemistry an impulse at the end of the century, such as it derived from the laws of atomic and molecular weights at the beginning of the century. In this new birth of the science from which so much was vainly hoped for medicine originally, there can scarcely fail to be great advantages for the sister science and especially for the cognate departments of physiological chemistry and pharmacology.

Overwork in the Schools.—Some of the sessions of certain sections were the scene of interesting discussions. The section for hygiene and the section for mathematical and scientific instruction each touched, though entirely independently and on different days, on the subject of overwork at school. The mathematicians and scientists demand that less time be given to the ancient languages, especially to Greek, and it was even suggested that Greek be dropped entirely in the preparatory schools. Practically all were agreed that too much work is demanded of pupils under the present system. Professor Pietzker of Nordhausen severely condemns the system of cramming for examinations. Professor Griesback of Mülhausen, in Alsace, condemns the examinations themselves. If a teacher does not know his pupils at the end of six or seven years, an hour of questioning them under the excitement of examinations will bring him no nearer such knowledge.

In the section for hygiene the question of school overwork came up in the discussion of Professor Kruse's (Bonn) paper on "Physical Degeneration and the Capability of Bearing Arms." Professor Bail of Prague claimed that the number of those exempted from military service because of physical defects is especially great among the one-year volunteers, that is, among those who because of a certain degree of education are excused from serving the full three years ordinarily required by law. The reason he considered to be overwork at school among this class. Professor Erb of Heidelberg had expressed himself in the same sense, especially as regards the development of neurasthenia in this class. General Arzt Stricker of Münster could not be sure that the Physical incapability of bearing arms was due especially in the educated classes to nervous diseases, but he had found hysteria and neurasthenia persistently on the increase among the men during their military service.

In the section on hygiene Professor Hankin of Agra, India, the government bacteriologist for the Central Department of India, was given a very enthusiastic reception. He spoke on "The Method of Dissemination of the Pest (Indian plague)." He considers it essentially a rat disease. In India years of careful observation have convinced him that the disease always originates among the rats, and that wherever successful means have been employed to drive out the rodents, the plague disappeared. Wherever the rats were most numerous the plague was worse. The surest prophylaxis against the plague would be in his opinion some sure method of getting rid of the rats.

This year the section for the history of medicine met independently for the first time and was very well attended by specialists. Körte, privat docent in archeology at Bonn, spoke on "Attic Gods of Healing and Their Places of Worship," with demonstrations from recent excavations by Dörpfeld. One very interesting bit of terra cotta found in the neighborhood of Veii was exhibited which was a sort of manikin and gave the positions of the organs of the human body. Its date is over 400 B. C.

In the section for history and also for veterinary medicine, the presentation of photographic copies of the well known papyrus of Kahun, which deals with veterinary medicine, attracted a great deal of attention. This is believed to be the oldest medical manuscript in existence.

SOCIETY PROCEEDINGS.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Abstract of the Proceedings of the Twenty-fourth Annual Meeting, Held at Nashville, Tenn., October 11, 12, 13, and 14, 1898.

FIRST DAY—MORNING SESSION.

THE Association met in the Hall of the House of Representatives at the State Capitol, and was called to order by the Chairman of the Committee of Arrangements, DR. DUNCAN EVE. Prayer was offered by REV. JAMES I. VANCE, D.D. Addresses of Welcome were delivered by HON. J. M. HEAD, on behalf of the city and State, and by DR. C. S. BRIGGS, on behalf of the profession of Nashville.

After the reading of the reports of the Secretary and Treasurer, which were accepted, the President's Address was delivered by DR. JOHN YOUNG BROWN of St. Louis, Mo. He selected for his subject

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

He dealt with the history of the Association, saying that it was organized twenty-four years ago. Its rapid growth is due to the loyalty of its members and to the fact that from its inception it has been a distinctively working body. It has never been a mutual-admiration society. He made suggestions for its improvement, and said that inasmuch as the Association contemplates the publication of an an-

nual volume of Transactions, he would suggest that the dues be raised from $3 to $5.

DR. CHARLES T. MCCLINTOCK of Detroit, Mich., read the first paper, which was entitled

IMMUNITY.

Of late years a large part of the laboratory work in medicine has had to do with immunity. Many facts have been discovered; in a few instances these have been of immediate practical value in the treatment or prevention of disease. But, for the most part, these facts are uncorrelated, often contradictory, their meaning not clear. Hypotheses have been advanced, but as yet we have no theory that will even approximately explain the facts of immunity. The future of work in this line is full of promise. For the infectious diseases at least, immunity and cure are one and the same. A diphtheria patient will be cured only when its tissues are immunized against the attack of the diphtheria poison. There are several kinds and various degrees of immunity. We have a natural and an artificial or acquired immunity; apparently these are entirely different in kind, dependent on different functions of the body, effected by different substances. There is racial immunity. Again we have an immunity correlated with age. Variations in susceptibility are noted in different varieties of the same species and in different families.

Again, there is an individual immunity. Still again, one part of the body, even one portion of the same tissue, may be immune, while the rest is very susceptible. These facts are not to be explained by general resistance, good health, etc. The most vigorous man may acquire smallpox or influenza. The healthiest cow is likely to take pleuropneumonia.

Metschnikoff's theory (phagocytic) is the best explanation we have for natural immunity. Nuclein seems to be the germicidal agent elaborated by the white corpuscle. If natural immunity is due to one or several chemical agents, it follows that it is limited. Chemical action is always greater to life. After recovery from certain infectious diseases there is more or less of immunity to that disease. In some instances, as in scarlet fever or syphilis, this acquired immunity usually lasts for life. The immunity following recovery from disease is not proportional to the intensity of the disease process. The ability of an organism to resist the attack of disease germs or their products can be increased, trained, educated, if you will. Thus, in producing diphtheria antitoxin, we often get our horses to bear without apparent harm several thousand times the fatal dose of poison for an untreated horse. It may happen that diphtheria or measles may after generations or centuries disappear, owing to the fact that the race becomes immune.

To what extent an acquired immunity can be inherited is both an interesting and important question. This sort of immunity is usually lost, at least so far as our tests will show, before the animal reaches the adult stage. This inherited immunity is not the same as the immunity of the suckling. This is due to the fact that the immunizing bodies pass into the milk. The child receives from its mother not only food, but disease resisting power. There are active and passive forms of acquired immunity. The horse producing antitoxin is actively immune; his tissues are producing antitoxin. The child receiving a dose of antitoxin is passively immune. It has borrowed the strength of the horse.

There is an immunity to poisons. The wolf thrives on putrid flesh. Some animals are immune to snake poison. The insusceptibility of the morphin user may be something more than mere tolerance. The drug may be in part destroyed, and this anti-power may have to do with the craving for the drug.

There is no satisfactory explanation for the facts of acquired immunity. The various theories as to the nature of antitoxin and its mode of action were given, with the conclusion that antitoxin, in some way as yet unknown, stimulates some portion of the body, and this in turn destroys the poison. There is no antitoxin, but, in short, an immunizing body. Immunity and cure are the same thing.

DR. GEORGE W. JOHNSON of Dunning, Ill., had had some experience with nucleinic acid in the treatment of pulmonary tuberculosis in cases of mixed infection, and had noticed a diminution in the number of pyogenic bacteria, and asked whether the phagocyte attacks the tubercle bacillus the same as it does pyogenic bacteria.

Dr. McClintock replied that he knew of no reliable investigations that have been made with reference to that point.

DR. ERNEST B. SANGREE of Nashville said it is believed by many investigators that the phagocytes eat live tubercle bacilli, and that cases in which tubercle bacilli are included in the phagocytes have a better chance to get well than those which do not contain them.

DR. DUDLEY S. REYNOLDS of Louisville was afraid that experimental observers have failed to note the necessary equilibrium between the circulating blood current and the lymph stream. Dr. Reynolds elaborated the theory of phagocytosis and showed how phagocytosis can never be successful if obstructions exist in the lymph-channels.

HYGIENE VERSUS DRUGS IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

DR. C. L. MINOR of Asheville, N. C., read this paper. Under hygienic and dietetic treatment the author embraced all such non-medicinal measures as are directed toward an increase in the vitality of the organism, and of its resistance to disease, and remarked that climatotherapy is but a branch of hygienic treatment, although he did not embrace it in his remarks, which were confined to the proper application to individual cases of exercise, gymnastics, massage, hydrotherapy, rest, sleep, diet, amusements, clothing, and quarters. A partial and unsatisfactory use of such measures is more or less general, but unless directions be definite and specific, they will fail of their purpose. The difficulty of getting a patient to yield implicit obedience to the doctor was dwelt on, the indefiniteness of the orders given being in part to blame. If he is to recover, the patient and doctor must both work hard, no half-hearted seekers for pulmonary

health being likely to recover. The necessity of carefully and fully writing out exact orders for every detail of the patient's life, to be followed religiously by him, was urged, such a prescription being in phthisis of more value than the more common one for drugs. All such measures were for convenience classed under three heads: Those affecting the patient's surroundings, his life, and his exercise.

The very common abuse of exercise was deplored, and the invariable rule stated, "exercise short of the point of fatigue," and the other of "no exercise with a temperature over 100.4° F.," following which no mistake can be made.

A very gradual accustoming of the patient to longer and longer walks, beginning with only fifty or a hundred yards in many cases, and increasing until finally from two to ten miles can often be easily tolerated and a judicious use later on of walks on increasing incline, till steep hills are easily surmounted, was warmly recommended. Pulmonary gymnastics was most especially dwelt upon for use in non-active cases, and among several methods recommended for chest development and the increase of vital capacity, that form of Indian club swinging called the double figure-of-eight was chiefly recommended. Finally, any intention to advocate nihilism in medicine was denied. In carefully selected cases certain drugs have undoubted value as adjuvants, never as the chief resource. The short life of most drugs in phthiso-therapy was noted, and ascribed to the fact that no man can treat this disease long and not realize that nothing that in the least degree upsets the stomach can be anything but a curse to the patient. The only valuable results are those based on a vitalizing of the whole system, a stimulation of metabolism on a strengthening of the cells to oppose the invader. The thing to be attacked is not so much the lesion in the lung directly as the lowered vitality of the body, the diminished capacity of the lungs, and the deficiency of appetite, and drugs directed to a conquering of the bacillus *in situ*, are not to be compared with measures which enable the organism itself to acquire the strength to overcome disease. These things can be brought about best by an improvement in nutrition, which must after all come from the stomach, and an increase of the amount of oxygen taken into the lungs. Air and food: These are the drugs to which we can always trust; they will never deceive us, if a patient can be taught to get both in good amounts whenever food can be assimilated and enjoyed and air breathed deeply, there is hope of cure. Throw away two-thirds of our medicine bottles and use the other third less often, carry out a hygienic plan of life, stimulate the appetite by Nature's appetizers—air and exercise—which are alone permanent in their results, and which are as superior to gentian or quassia as sunlight is to darkness.

DR. S. C. BALDWIN of Salt Lake City, Utah, contributed a paper on

CONGENITAL SCOLIOSIS.

Scoliosis is (1) the most common of all deformities. (2) It is most often found in children under ten, rarely beginning after eighteen. (3) It is found more often in girls in the ratio of five to one. (4) The etiology is in a large number of cases very uncertain. Congenital scoliosis is very rare. Tubley of London, in the latest English work on deformities, says that he has been able to verify only four cases.

The case reported by the essayist was first diagnosed as scoliosis when the child was twenty-one months old, but the father had noticed the "lump" ever since the child was first washed. The interesting features of the case were that the curvature was in the lower cervical and upper dorsal region. There was some pressure on the cord, as shown by the more or less deficient development of the right side. The convexity of the curve in this case was to the left. There was partial paralysis of the forefinger of the right hand. There was sweating and flushing of the left side but none on the right.

The cause of the scoliosis in this case was thought to be the lack of amniotic fluid while in utero, probably allowing the muscular walls of the uterus to press on the fetus and hold it in a faulty position, and in this way cause a wedge-shaped development of the bodies of the vertebræ. This theory has been advanced by Weissenberg, Hirsh, and Schauz in the last year. In this case the mother was very small, and passed at the time of confinement so little water that she did not know there was any, and felt no motion comparatively during pregnancy.

DR. SAMUEL E. MILLIKEN of Dallas, Texas, had seen one case of scoliosis in a child under one year of age, but was not prepared to say whether it was congenital or not.

AFTERNOON SESSION.

DR. WILLIAM L. BAUM of Chicago read a paper on

THE THERAPEUTIC VALUE OF MARMOREK'S SERUM.

He dealt with the literature of the subject in an exhaustive manner. Twenty-two cases have come under his observation in which the serum was used. Of these, 19 were cases of erysipelas; 1 of erysipelas plus tubercular nuchal glands; one of facial erysipelas during child-bed without septicemia, and 1 of erysipelas with puerperal septicemia and double labial abscess. The last was the only fatal case. The serum used was supplied by Parke, Davis & Co.

The deductions he draws from an analysis of the literature and his own experience are: (1) In pure streptococcic infections the serum undoubtedly exercises a favorable influence on the course of the disease. (2) In the mixed infections the influence of the serum is noticeably demonstrable, but it merits further trial as an adjunct to other treatment. (3) Considering the grave character of the complications of a non-streptococcic nature reported, ordinary rules of therapeutics demand that in such cases, as with the diphtheria antitoxin, all indicated therapeutic procedures must be employed as well as the serum. (4) In view of the fact that erysipelas streptococci and phagocytes have been found to exist side by side in the lymph channels, it is fair to assume that the influence of the serum is directly exerted bacteriologically on the streptococci and not entirely through stimulation of phagocytic action. (5) The initial dose in all cases should be 20

c.c., to be followed by 10 or 15 c.c., according to the indications, every twenty-four hours.

DR. CHARLES L. MINOR said his experience had been practically confined to secondary infections in tuberculosis. He had used the serum of Parke, Davis & Co. with considerable satisfaction in preference to Marmorek's.

DR. SAMUEL E. MILLIKEN had used antistreptococcic serum in two cases, both of which terminated fatally. One was a case of abscess of the liver, the other a suppurative appendicitis.

DR. WILLIAM K. JAQUES of Chicago called attention to infections in the pulmonary tract that he has found to be purely streptococcic, and in such cases he has advised injections of antistreptococcic serum with good results.

DR. BAUM, in closing, emphasized the importance of diagnosing the kind of infection present.

DR. ALBERT BERNHEIM of Paducah, Kentucky, presented a paper and reported three cases of syphilis in which he administered blue ointment by the mouth with satisfactory results. He urged a thorough trial of this method, believing it will please the patient as well as the physician. The method of administering blue ointment by inunction is disliked by the patient on account of its nastiness and inconvenience, hence if another method of using the ointment can be substituted with the same good and quick results, why not adopt it?

DR. JAMES T. WHITTAKER of Cincinnati delivered the address on medicine. He selected for his subject

DIABETES MELLITUS.

DR. ANDREW TIMBERMAN followed with a paper, entitled

MASTOIDITIS; WHEN TO OPERATE AND HOW.

The cause and symptoms of this affection were described. To know when to operate one must be able to exclude the diseases which are often accompanied by inflammatory conditions over the mastoid without actual involvement of the bone, and which quickly recede when the primary disease is properly combatted. Every physician in his experience sees cases of simple furunculosis, and diffuse external otitis presenting as marked symptoms as painful and swollen mastoids. The tissues are boggy and the edematous condition is determined by palpation, pain, and pressure. Such diseases, as well as syphilis, must always be excluded as a *sine qua non* before operating.

He divided cases of mastoiditis into two classes, the first comprising those complicating acute aural disease; the second class, those complicating chronic aural affections. This division ignores primary mastoiditis, which is very infrequent.

Conclusions.—Operative measures should be instituted: (1) to preserve the function of hearing as well as to prevent a fatal issue; (2) earlier in mastoiditis due to scarlet fever, diphtheria, and the worst cases of influenza than when due to cold, measles, typhoid fever, etc.; (3) in the acute cases of mild infection, when subsidence does not occur within at most eight days (Schwartze). A shorter period is safer in a virulent infection. (4) Recurrent mastoiditis due to any cause. (5) In mastoiditis complicating a chronic suppurative otitis. (6) In acute cases when there is a drooping of the lining membrane of the superior posterior wall of the external auditory canal, carrying with it the membrana Shrapnelli; in chronic cases when at the same place a crater-like opening leads to the recessus epitympanicus and auditus ad antrum, even though in neither case symptoms immediately menacing life be present.

The author favors the typical or original Schwartze method of opening the mastoid antrum. Its success in given conditions justifies its application; its failure in given conditions has resulted in a more perfect procedure styled the Schwartze-Stacke or radical operation.

DR. J. HOMER COULTER of Chicago maintained that the general practitioner should not treat cases of mastoiditis in which the symptoms are well defined, and no one who has not had considerable surgical experience should attempt the Schwartze operation.

DR. J. A. STUCKY of Lexington said that in many cases of necrosis of the malleus he has made a free incision along the posterior-superior wall of the canal, curetted the diseased bone away, tamponed the canal lightly with iodoform gauze, and patients have done well without undergoing the radical operation.

DR. DUDLEY S. REYNOLDS laid stress on the importance of instituting constitutional medication in the stage of invasion in cases of mastoiditis, saying that an ounce of prevention at this time is most preciously bestowed.

DR. L. B. GRADDY of Nashville called attention to a point not mentioned in the paper—the differential diagnosis between mastoiditis and mastoid periostitis. If cases are carefully observed there is as much difference between the two conditions as there is between a periostitis of the tibia and an epiphysitis. This differentiation is of paramount importance in the treatment, whether it be medical or surgical.

PROPHYLAXIS IN NOSE AND THROAT DISEASES.

DR. J. HOMER COULTER of Chicago read a paper on this subject. He said that there are many preventable pathological conditions in the nose and throat, and that many of the ordinary diseases of this portion of the anatomy have evoluted into more serious and distinctly different affections will be admitted without question. He omitted any reference to such conditions as syphilis, tuberculosis, diphtheria, influenza, or the exanthemata, inasmuch as the possible prophylaxis in each affection is a matter of general knowledge. He also omitted reference to any technical details which are at best mooted points with authorities.

Surgery does not cure all conditions, nor does it even prove always a prophylactic blessing. So also do local applications and constitutional treatment prove unavailing if universally depended upon. This is due in a measure to the lack of carefully exacting and eliminative diagnosis. With the development of our knowledge of the physiology of the nose and throat have come also new ideas of the connection between many diseases of those

organs and of their relative etiological importance. The impairment to ventilation and drainage is a most important factor, and one usually amenable to surgical treatment. "Taking cold" is not only a most frequent condition, but one the most susceptible to prophylactic measures. Clothing of the entire body is a factor of paramount importance in prophylaxis. Too much clothing about the head and neck is just as disastrous as insufficient protection. Adenoids, polypi, spurs, exostoses, deviations, deflections, and sensitive areas are each amenable to surgical treatment and demand such interference as soon as recognized. On the other hand too much surgery is quite as disastrous as too much conservatism. The tonsils are the cause of other and reflex pathological conditions as frequently as are adenoids. Mouth-breathing should be recognized as a most significant danger signal.

Conclusions.—Anything which produces an alteration in the normal physiological metabolism of the mucous membrane of the nose and throat; any alteration in the nutrition of the parts, any abnormal variation in functional activity; any considerable change in the histological anatomy are each and all remedial surgically or otherwise and are therefore amenable to prophylactic efforts.

DR. A. J. STUCKY of Lexington followed with a paper, entitled

PERITONSILLITIS OR QUINSY; CAUSE AND TREATMENT.

Of ten authors consulted seven after citing hereditary predisposition, exposure, etc., mention rheumatism and gout as the most prolific causes of this malady. Close observation and careful testing in selected cases convinces him that the rheumatic, or more probably the uric-acid diathesis, has more to do with the causation of this disease than any other factor.

Coming to the treatment he believes if the majority of cases of quinsy are seen within forty-eight hours after the first onset of the disease, they can be aborted to such an extent that suppuration will not take place. In cases that progress to suppuration, he strongly advocates early and free puncture, just as soon as there is marked distention, in order to relieve pain and stop the destructive suppurative process. For this purpose he uses a modification of an ear spoon, first described by Spier, and not a knife.

(To be continued.)

REVIEWS.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Vol. X. Published by the Association, 1898.

THIS volume, a record of the meeting held in St. Louis in November, 1897, contains the usual number of interesting papers. The improvement of surgical technics and a discussion of extra-uterine pregnancy are salient features. Judging from this report the meeting must have been an unusually interesting one.

THERAPEUTIC HINTS.

For the Coughing Spells of Phthisis.—

℞	Bromoformi	gtt. xxx
	Ext. opii	gr. ii
	Spiritus	ʒ iiss
	Syr. ipecacuanhæ	℥ i
	Aq. laurocerasi	ʒ v
	Syr. simplicis	℥ v.

M. Sig. Three or four tablespoonfuls in twenty-four hours.

For Tapeworm.—After purgation by means of castor oil or sulphate of magnesia, administer the following mixture:

℞	Spts. chloroformi	ʒ ii
	Ol. terebinthinæ, Oleoresinæ aspidii aa.	ʒ i
	Glycerini	℥ ss.

M. Sig. Two teaspoonfuls every hour for four or six hours.

Symptomatic Treatment of Arteriosclerosis.—

1. For vertigo:

℞	Potassii iodi	gr. lxxx
	Potassii bromidi	ʒ iiss
	Sodii arsenitis	gr. 1⅗
	Aq. dest.	℥ x.

M. Sig. Two tablespoonfuls a day.

2. Diuretic for nocturnal dyspnea:

℞	Ext. grindeliæ fl.	℥ i
	Tinct. convallariæ	ʒ iiss
	Tinct. scillæ	*m.* lxxx.

M. Sig. Fifteen drops three times a day.

3. For palpitation:

℞	Tinct. digitalis, Tinct scillæ, Tinct. aconiti aa	ʒ ii.

M. Sig. Ten drops three or four times daily for eight or ten days.

4. For cardiac weakness due to errors in diet, etc.:

℞	Sparteini sulphat.	gr. viii
	Sodii iodi	gr. lxxx
	Aq. dest.	℥ iii.

M. Sig. One teaspoonful twice a day.

Treatment of Scarlatinal Nephritis.—HURWITZ reports a case in a child of seven, in which, after all other treatment had proved ineffectual, a rapid and complete cure was produced by bleeding to the amount of about six ounces. The edema disappeared on the following day.

Formula for a Dental Soap.—

℞	Thymol	Parts 5
	Extr. krameriæ	" 20
	Glycerini	" 120
	Magnesiæ	" 10
	Sodii borat.	" 80
	Ol. menthæ pip.	" 20
	Saponis med.	" 600

Dissolve the thymol and krameria in the glycerin (hot), then add the other constituents, stirring constantly.